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Contribution to the knowledge of the Lygaeoidea (Hemiptera, Heteroptera) fauna of Turkey

Gülten YAZICI, Erol YILDIRIM & Pierre MOULET

A b s t r a c t : This study is based upon material of superfamily Lygaeoidea collected from different localities of Turkey between 1967 and 2012, mostly 2009-2012. The study resulted in recording for Turkish fauna of 58 species from 40 genera of Lygaeoidea are recorded from Turkey. Among them, *Lygaeus equestris* (LINNAEUS, 1578), *Spilostethus pandurus* (SCOPOLI, 1763), *S. saxatilis* (SCOPOLI, 1763), *Nysius cymoides* (SPINOLA, 1837), *N. graminicola* (KOLENATI, 1845), *N. senecionis* (SCHILLING, 1829), *Oxycarenus pallens* (HERRICH-SCHÄFFER, 1850), *Rhyparochromus pini* (LINNAEUS, 1758), *Xanthochilus quadratus* (FABRICIUS, 1798) and *Pyrrhocoris apterus* (LINNAEUS, 1758) have been found the most abundant and widespread species. In addition, new localities are mentioned for some species which have already been reported in Turkey.

K e y w o r d s : Hemiptera, Heteroptera, Lygaeoidea, Fauna, Turkey.

Introduction

Lygaeoidea (or seed-bugs) is a group of Pentatomomorpha, which at world scale comprises 15 families (HENRY 1997); (only Mirids are more numerous). In the Palaearctic Region they are represented by nearly 500 species, 130 genera, and 13 subfamilies (PÉRICART 1998a, b, c; AUKEMA & RIEGER 2001).

The coloration of Lygaeoidea is cryptic and mimetic: red, reddish, brown, brownish, blackish varied by cream and or black stains; as in other groups the black and red coloration is aposematic. The head is triangular, more or less elongate, and eyes are (or not) striking over lateral margins. Antennae 4-segmented are inserted in front of eyes. Generally the pronotum is trapezoid but, according to the group, it is elongate or not, sometimes quadrate, rarely transverse; nearly always marked by a median transverse furrow. The scutellum is triangular often flat, sometimes swollen basally. The hemelytra (except in brachypterous forms) are fully developed, chitinated and reach the apex of abdomen (rarely surpasses it). The 4-5 veins of the membrane are simple and do not anastomose. The trichobothria usually are ventral but this condition varies greatly according to families. Male genitalia are symmetrical and quite diverse by families and subfamilies. In females, the lacinate ovipositor is well developed and the spermathecae are diverse but always have a distinct apical bulb. The eggs of Lygaeoidea have no operculum and the chorion bears some or namentations as spines or mushroom-

sculptures, etc. Micropyles, in variable numbers, are present on the cap (PUTSHKOV 1969; SCHUCH & SLATER 1995; PÉRICART 1998a, b, c, 2001). The size of Lygaeoidea varies from 1.5 to 12 mm. Generally Lygaeoidea live on the ground and are phytophagous (feeding on seed, stems, leaves, root-suckers, or mycetophagous), some are sap suckers (Blissinae) and some other (Geocorinae) are predators (Berytids are considered by several authors as predators but in Palearctic region they are phytophagous). Some are agricultural pests, attacking crops (Oxycarenidae), cotton (Blissidae), wheat (Lygaeidae), and other crops (PUTSHKOV 1969; PÉRICART 1998a, b, c).

DUMÉRIL (1806) recognized firstly the family rank of Lygaeidae, in the course of the XIXth century taxonomic studies have been particularly numerous (e.g. by PUTON & HORVÁTH (1901) and STÅL (1868, 1872, 1874) recognized the great groups we consider as families and subfamilies. In his study on the phylogeny of Pentatomomorpha, HENRY (1997) presented a very important contribution to the taxonomy and classification of the "Lygaeidae". He considered the group as the superfamily Lygaeoidea and erected many subfamilies of the former Lygaeidae at family level. This work wins little by little the acceptance of all contributors. Lygaeoidea are now considered as a monophyletic group when including Malcidae Berytidae and Colobathristidae (implicitly Piesmatidae were comprised in). HENRY (2009) considers nearly all former subfamilies of Lygaeidae as families. According to some authors, the whole Coreoidea should be connected to (SWEET 2000) but in this moment this hypothesis is not discussed. Palearctic catalogs were edited by PUTON (1875), OSHANIN (1906), STICHEL (1959) and PÉRICART (2001), LETHIERRY & SEVERIN (1894), SLATER (1964) and SLATER & O'DONNELL (1995) did at world-scale. In Turkey, KIRITSHENKO (1918) and ÖNDER et al. (2006) studied the whole fauna of Heteroptera (incl. Lygaeoidea).

Pyrrhocoridae are very similar to Lygaeidae particularly to Lygaeinae thanks to their clear cut red and black coloration. The main differences between these two major groups are the lack of ocelli (though a character known in Phasmosominae and some Rhyparochrominae of Lygaeidae), the genitalia: particularly female spermathecae (PLUOT-SIGWALT 1975) and the membrane of hemelytra with only 5 veins in both groups but simple in Lygaeoidea and anastomosed in Pyrrhocoroidea (MOULET 1995). In fact the systematic statement of the group is not firmly sure but is considered as an independent major group by several authors (e.g. SCHUH & SLATER 1995) and it seems to form a "bridge" between Lygaeoidea and Coreoidea. Pyrrhocoroidea live on the ground and are phytophagous; sometimes they are pest for Malvaceae, crops and cotton although alternative alimentation (accidental?) towards carnivory is known (MOULET 1995). The Palearctic *Pyrrhocoris apterus* is a wellknown experimental model particularly in genetic studies. The group is very important in tropical regions but in Palaearctic there is only 1 family, (Largidae are known in tropic and subtropical regions), 13 genera and 43 species and subspecies (KERZHNER 2001).

Some faunistic studies on this superfamily have been made in Turkey by HORVÁTH (1891, 1901), FAHRINGER (1922), HOBERLANDT (1956), SEIDENSTÜCKER (1957, 1958, 1960), WAGNER (1959), TUATAY et al. (1972), AYSEV (1974), ÖNDER et al. (1981, 1984), ÖZBEK & ALAOĞLU (1987), ÇAKIR & ÖNDER (1990), KIYAK (1990, 1993), ÇAĞATAY (1988, 1989a, b, 1995), LODOS et al. (1989, 1999), YILDIRIM et al. (1999), ÖZSARAÇ et al. (2001), ÖZSARAÇ & KIYAK (2001), BEYAZ & TEZCAN (2002), KIYAK et al. (2004), KIYAK & AKAR (2010) and FENT (2011).

The aim of this paper is to bring new collect and biological data on Lygaeoidea in Turkey. In this study, 58 species from 40 genera of Lygaeoidea are recorded from Turkey.

Materials and Methods

The material of the Lygaeoidea was collected from different localities of Turkey between 1967 and 2012, the oldest collects are now part of the collections of the Entomological Museum, Erzurum, and the latest have been made during collect trips and focused on biological and ecological observations. Provinces of the collected specimens are given in alphabetical order in the following list. The material is deposited in the Entomology Museum, Erzurum, Turkey (EMET).

Results

In this study, 58 species from 40 genera of Lygaeoidea are recorded from Turkey.

Superfamily L y g a e o i d e a

Family B e r y t i d a e

Subfamily B e r y t i n a e

Tribe B e r y t i n i n i

Berytinus (Lizinus) geniculatus (HORVÁTH, 1885)

M a t e r i a l e x a m i n e d : Erzurum: Olur, Yeşilbağlar, 1000 m, 16.VI.2010, ♀; Konya: Beyşehir, Gökçimen, 21.VII.1997, ♂.

N o t e : A species of Ponto mediterranean distribution.

Family C y m i d a e

Tribe C y m i n i

Cymus melanocephalus FIEBER, 1861

M a t e r i a l e x a m i n e d : Bayburt: Demirözü, 1650 m, 17.VI.2010, ♂; Erzincan: Geyikli, 1160 m, 11.VI.2010, 7♀♀, 2♂♂, Mercan, 1381 m, 10.VI.2010, 5♀♀, ♂; Erzurum: 25.VI.1980, ♂, Aşkale, Kopdağı, 2380 m, 15.IX.2012, 3♀♀, ♂, Pazaryolu, 1445 m, 20.VII.2011, ♂, Kümbettepe, 1376 m, 24.VI.2012, ♀, ♂, Şenkaya, Timurkışla, 1314 m, 14.VII.2012, ♂; Ordu: Gölyalı, Turnasuyu, 16.VII.1991, ♂.

N o t e : West palaearctic extending to Middle East and Mid Asia. On Cyperaceae and Juncaceae, Caryophyllaceae and Polygonaceae (PÉRICART 1998a; LINNAVUORI 2011; GHAHARI & MOULET 2012).

Family *Geocoridae*

Geocoris (Geocoris) megacephalus (ROSSI, 1790)

Material examined: Adana: Karataş, 27.VII.1984, ♀, Kozan, 28.VII.1994, ♀, 25.IX.1984, ♂; Antalya: 4.IX.1995, ♀.

Note: Mediterranean area. In Europe *G. megacephalus* feeds upon *Ischnodemus* sp. (Lygaeoidea, Blissidae) (PÉRICART 1998a), in Iran, a predator of *Bemisia tabaci* (Hemiptera, Aleyrodidae) (GHAHARI & MOULET 2012).

Geocoris (Piocoris) erythrocephalus (LEPELETIER & SERVILLE, 1825)

Material examined: Adana: 18.IV.1984, ♂, Karataş, 27.VII.1984, 2♀♀, Kozan, 28.VII.1984, 2♂♂, 29.VII.1984, ♀, ♂, 20.VIII.1983, ♂; Antalya: 21.VII.1984, 3♀♀, 2♂♂; Erzurum: Güzelyayla, 2000 m, 19.VIII.2009, ♀, University field, 1850 m, 15.V.2010, ♀, 1890 m, 23.VIII.2011, ♀, Aşkale, Demirkıran, 1699 m, 11.VIII.2012, ♀, Pasinler, Yayla, 1990 m, 17.VII.2011, ♀, Pazaryolu, Esenyurt, 1400 m, 4.VIII.2012, ♀; Hatay: Kurttepe, 22.VI.1987, ♀; Kars: Kağızman, 1.V.1969, ♂.

Note: Holomediterranean extending to Central Europe and Middle East. On several Lamiaceae, Fabaceae and Boraginaceae (PÉRICART 1998a; HEISS 2002; LINNAVUORI 2007).

Family *Heterogastridae*

Heterogaster artemisiae SCHILLING, 1829

Material examined: Erzurum: Köprüköy, Pekecik, 1722 m, 26.VI.2011, ♂.

Note: On Lamiaceae (mainly *Thymus*). Euro mediterranean until Central Asia and China (PÉRICART 1998a, GHAHARI & MOULET 2012).

Heterogaster cathariae (GEOFFROY, 1785)

Material examined: Erzurum: Palandöken, 2300 m, 1.VIII.2010, ♂, Horasan, Yörükatlı, 1854 m, 29.VII.2010, ♀, İspir, Yeşilvadi, 2285 m, 24.VI.2012, ♂, Karayazı, Kırğındere, 2200 m, 17.VI.2012, ♀, Pasinler, Rabat, 2400 m, 11.VII.1996, ♀, Sansar Deresi, 1877 m, 17.VII.2011, ♂, Tekman, Körsu, 1984 m, 26.VI.2011, ♂, Tortum, Taşbaşı, 1816 m, 9.VII.2011, 2♀♀.

Note: Holomediterranean known in Central Europe, Middle East and China. On *Nepeta*, *Lycopus*, *Melissa*, *Salvia* (Lamiaceae) (PÉRICART 1998a; LINNAVUORI 2007, GHAHARI & MOULET 2012).

Heterogaster urticae (FABRICIUS, 1775)

Material examined: Artvin: Yusufeli, Demirkent, 387 m, 15.VI.2010, ♂; Bayburt: 1550 m, 12.VIII.2009, ♂; Erzurum: Karagöbek, 1977 m, 31.VII.2010, ♂, Horasan, 1510 m, 22.VII.2010, ♀, Yörükaltı, 1854 m, 29.VII.2010, ♂, Karayazı, Yukarı Söylemez, 1905 m, 17.VI.2012, ♂, Pasinler, Kevenlik, 1843 m, 22.VI.2012, ♀, ♂, Şenkaya, Turnalı, 1700 m, 31.VII.2010, 2♀♀; Kars: Kağızman, 23.VIII.1991, ♂; Trabzon: 2.VII.1992, ♀.

Note: Species of West palaearctic distribution. On several *Urtica* (Urticaceae), other cited plants probably are host plants (PÉRICART 1998a).

***Platyplax salviae* (SCHILLING, 1829)**

Material examined: Erzurum: İspir, Öztoprak, 1724 m, 15.VII.2012, ♀, 2♂♂, Karayazı, Yukarı Söylemez, 1905 m, 17.VI.2012, Oltu, 1455 m, 10.VI.2012, ♂, Yolboyu, 1135 m, 10.VI.2012, ♀, Olur, Kaban, 1215 m, 19.VII.2012, ♀, 2♂♂, Yukarı Karacasu, 1521 m, 19.VII.2012, 3♀♀, Uzundere, Gölbaşı, 1150 m, 14.VIII.2012, ♀, ♂.

Note: Euro siberian species until China. On several Lamiaceae particularly of the genus *Salvia*.

Family *Lygaeidae***Subfamily *Ischnorhynchinae******Kleidocerys resedae* (PANZER, 1797)**

Material examined: Erzurum: University field, 1850 m, 22.VI.2007, ♀, 9.VII.2007, ♂, 20.VIII.1998, ♂, Çat, 2000 m, 2.X.2012, ♀; İstanbul: Çamlıca, 5.VIII.1984, ♂.

Note: Holarctic species (known in USA and Canada). On several Butulaceae (*Betula*, *Alnus*), Ericaceae (*Rhododendron*, *Ledum*) and, fortuitously, on other plants (PÉRICART 1998a).

Subfamily *Lygaeinae****Lygaeus equestris* (LINNAEUS, 1758)**

Material examined: Afyon: Dinar, 13.VIII.1990, 3♀♀, 14.VIII.1990, 3♀♀, 3♂♂; Amasya: 12.VII.1993, ♀; Ankara: 30.VII.1997, ♂, Elmadağ, 20.VIII.1990, ♀, Kalecik, 13.VIII.1990, ♀, Kızılcahamam, Işıkdagi, 1650 m, 18.IX.2011, ♀, Sipahiler, 975 m, 16.VII.2011, ♀, 14.VIII.2011, ♂; Antalya: Gazipaşa, 100 m, 1.VIII.2010, ♀, Kumluca, 21.V.1993, ♂, Manavgat, 5.VII.1996, ♀, 30.VIII.1996, ♂, Serik, 12.IX.1993, ♂, 24.IX.1993, ♀, 26.IX.1993, ♂; Artvin: 650 m, 3.VIII.2009, 2♀♀, Şavşat, 800 m, 3.VIII.2009, 2♀♀, Yusufeli, Işhan, 600 m, 16.VI.2010, ♀; Aydın: Yenihisar, 10.VIII.1996, ♀; Bayburt: 2.VII.1996, ♀, 1537 m, 1.X.2012, ♀, Kopdağı, Şehitler Çeşmesi, 2400 m, 17.VI.2010, ♂, 2344 m, 12.VIII.2009, ♀; Bingöl: 16.VII.1976, ♂; Burdur: Yeşilova, Yarıklı, 8.VII.1996, 3♀♀, 3♂♂, 9.VIII.1996, 2♀♀; Denizli: Buldan, 15.VI.2010, ♂, Serinhisar, 1000 m, 24.VII.2011, ♂; Erzincan: Elmalı, 28.VII.2011, ♀, Işıkpınar, 16.VIII.2010, ♂, Refahiye, 1500 m, 20.VI.2009, ♀, Üzümlü, 29.V.1991, ♂, 1518 m, 10.VI.2010, ♂, 1500 m, 22.IX.2009, ♂; Erzurum: 1850 m, 1.V.1969, ♀, 31.V.1971, ♀, 6.VI.1968, 3♀♀, 9.VI.1983, ♂, 23.VI.1980, ♀, 3♂♂, 2.VII.1970, ♂, 9.VII.1990, ♂, 20.VII.1967, ♀, 27.VII.1967, ♀, 1853 m, 27.VII.2011, ♀, 2.VIII.2012, ♂, 3.VIII.2012, ♀, 5.VIII.1970, ♀, 18.VIII.1967, 2♀♀, 10.IX.1997, ♂, 25.IX.2010, ♂, 28.IX.1993, 4♀♀, 1.X.2012, ♀, 5.X.2010, 2♀♀, ♂, 11.X.1990, 2♂♂, 13.X.1967, ♀, 15.X.1967, ♀, 3♂♂, 15.X.1970, 2♀♀, 16.X.1970, ♀, 20.X.1967, 2♀♀, 21.X.1967, 2♂♂, Akdağ, 9.VII.1989, ♀, Dadaşköy, 20.VI.1971, ♀, Dumlubaba, Güngörmez, 2400 m, 1.VII.2010, 2♀♀, ♂, Güzelyayla, 2000 m, 19.VIII.2009, ♀, ♂, Karagöbek, 2033 m, 7.VI.2012, 2♀♀, 2♂♂, 1398 m, 3.VIII.2009, ♀, Kırkgözeler, 1584 m, 13.VIII.2011, ♀, Palandöken, 2200 m, 6.VIII.1996, ♀, University field, 1850 m, 15.V.2010, ♀, 20.V.2009, ♂, 1.VI.2009, ♀, 15.VI.2007, ♀, 3.VII.2008, ♀, 9.VII.1996, ♀, 22.VII.2011, ♂, 17.VIII.2010, ♀, 18.VIII.2010, ♀, 8.IX.2009, 2♀♀, 21.IX.2012, 4♀♀, Yarımcı, 1950 m, 13.VI.2010, ♂, Yeşildere, 1684 m, 28.VIII.2011, ♀, Aşkale, 1661 m, 19.VI.2012, ♀, Çayköy, 1580 m, 27.VII.2012, ♂, Çiftlik, 1620 m, 3.VI.2010, ♀, Kandilli, Abdalcık, 1756 m, 1.VIII.2010, ♂, Kopdağı, 2380 m, 5.IX.2012, 2♂♂, Aziziye, Dadaşkent, 1850 m, 3.VI.2010, ♂, Gelinkaya, 1796 m, 24.VI.2012, ♀, ♂, Özbek, 1930 m, 5.VIII.2011, ♀, 2100 m, 5.VIII.2011, ♂, Yoncalık, 1900 m, 4.VIII.2009, ♀, Çat, 1913 m, 23.VII.2011, ♀, 2250 m, 6.VIII.2010, ♀, ♂, Sarıkaya, 1789 m, 11.VIII.2012, ♂, Horasan, 15.VII.1993, ♂, Akçataş, 1659 m, 13.VIII.2012, ♀, ♂, Çayırdüzü, 1799 m, 22.VI.2012, ♂, 1794 m, 21.VIII.2011, ♀, Degirmenli, 1608 m, 22.VI.2012, ♂, 1643 m,

13.VIII.2011, ♀, Dönertaş, 1907 m, 13.VIII.2012, ♂, İspir, 14.V.1992, ♀, 15.VI.1971, ♂, 1300 m, 7.VIII.2009, ♀, ♂, İspir, Çayırözü, 1947 m, 4.VIII.2012, ♀, İspir Pass, 1950 m, 20.VIII.2009, ♀, Çapans, 2150 m, 20.VIII.2009, 3♀♀, Yeşilvadi, 2285 m, 24.VI.2012, ♀, Karayazı, Yukarı Söylemez, 1905 m, 17.VII.2012, ♂, Köprüköy, Ataköy, 1788 m, 26.VI.2011, ♀, ♂, Eyüpler, 1745 m, 16.VI.2012, ♀, 26.VI.2011, ♀, Güzelhisar, 1955 m, 16.VI.2012, ♂, 1930 m, 2.VII.2010, ♀, ♂, Marifet, 1685 m, 26.VI.2011, ♀, Örentaş, 2103 m, 30.VI.2012, ♀, Narman, 1543 m, 30.VI.2012, ♂, 1557 m, 4.VIII.2009, ♀, Göllü, 1842 m, 30.VI.2012, ♂, İncedere, Kireçli Pass, 1987 m, 21.VII.2010, ♂, Kilimli, 1716 m, 13.VIII.2012, ♂, Toygarlı, 2123 m, 10.VII.2011, ♀, Yanıktaş, 1628 m, 30.VII.2011, ♂, Oltu, 1180 m, 24.VII.2009, 2♀♀, 2♂♂, 1750 m, 3.VIII.2009, ♂, Başbağlar, 1925 m, 13.VII.2011, ♀, Çamlıbel, 1661 m, 30.VI.2012, 3♀♀, 1700 m, 14.VII.1990, ♀, 1135 m, 21.VII.2010, ♀, Demirtaş, 1888 m, 6.VII.2012, ♀, Özdere, 1927 m, 16.VII.2012, ♂, Sarısaz, 1388 m, 5.VIII.2012, ♂, Tutmaç, 1720 m, 16.VII.2012, 2♀♀, ♂, Yarbaşı, 1784 m, 6.VII.2012, 2♂♂, Yayla, 2005 m, 10.VI.2012, ♂, Olur, 1225 m, 10.VI.2012, ♂, Boğazgören, 1168 m, 19.VII.2012, ♂, Kaban, 1215 m, 19.VII.2012, ♀, Ormanbaşı, 951 m, 6.VII.2012, ♀, 935 m, 5.VIII.2012, 2♀♀, Tekeli, 1079 m, 4.VIII.2009, ♀, Yeşilbağlar, 1062 m, 6.VII.2012, ♂, 987 m, 10.VII.2011, ♀, Pasinler, 1600 m, 10.V.1983, ♀, 29.VI.1987, 3♀♀, 8.VII.2009, 2♀♀, ♂, 15.VIII.1987, ♀, ♂, Pazaryolu, 1430 m, 4.VIII.2012, ♀, 1010 m, 7.VIII.2009, ♀, ♂, Şenkaya, 1900 m, 23.V.1977, ♀, 1815 m, 31.VII.2010, ♂, Gözebaşı, 1794 m, 14.VII.2012, ♀, İkizpınar, 1589 m, 31.VII.2011, ♂, Paşalı, 1173 m, 31.VII.2010, ♀, ♂, Sındıran, 1491 m, 31.VII.2010, ♀, Taht, 1232 m, 17.VII.2010, ♀, 2♂♂, Turnalı, 1750 m, 29.VI.1989, ♀, 25.VII.1996, ♀, 1700 m, 31.VII.2010, ♂, Tekman, Çiçekdağı, 1846 m, 26.VI.2011, ♂, Kili Mezra, 1940 m, 16.VI.2012, ♀, Tortum, 1245 m, 27.V.2011, ♀, 1661 m, 23.VI.2011, ♀, 27.VII.1990, ♀, 1600 m, 31.VII.2010, ♀, 1650 m, 3.IX.2011, ♀, Aşağı Sivri, 1546 m, 16.VII.2012, 2♀♀, Aksukapı, 1648 m, 10.VI.2012, ♀, 2.VII.2012, ♀, Arılı, 1650 m, 30.VIII.2012, ♂, Çamlıca, 1674 m, 16.VII.2012, ♂, Dikmen, 1304 m, 14.VIII.2012, ♀, Yukarı Sivri, 1909 m, 16.VII.2012, ♂, Uzundere, Kirazlı, 1231 m, 21.VII.2012, ♀, Selale, 850 m, 27.V.2010, ♀, ♂, 1012 m, 27.V.2011, ♂, Altınçanak, 1048 m, 9.VII.2011, ♂, Çağlayanlı, 967 m, 27.V.2011, ♀; Giresun: Buluncak, 150 m, 27.VIII.2010, ♀; Hatay: Dört Yol, Amanos Mountains, Küşne Yaylası, 1400 m, 9.VII.2009, 2♀♀, 3♂♂; İğdir: 850 m, 20.VI.2009, ♀, 830 m, 23.VI.2010, ♀, 16.VII.1997, ♀, 19.VII.1997, ♀; Isparta: Çandır, Yazılıkanyan, 3.VIII.1996, ♀, 5.VIII.1996, ♂, 8.VIII.1996, ♀, Eğirdir, Serpil, 15.VIII.1996, ♂, 16.VIII.1996, ♀, 20.VIII.1996, ♂; İstanbul: Bakırköy, Florya, 25 m, 7.IX.2011, ♂, Beykoz, 70 m, 15.VII.2011, ♀, ♂, Gaziosmanpaşa, Tayakadın, 93 m, 11.VIII.2010, ♂, Küçük Çekmece, 3 m, 10.VIII.2009, ♀, Zeytinburnu, 3 m, 11.VIII.2011, ♂; Kahramanmaraş: 550 m, 15.VII.2009, ♂; Karabük: 12.IV.1994, ♀, 25.VII.1994, ♂; Kars: Sarıkamış, Akkurt, 1650 m, 13.VIII.2009, ♀, ♂, Karakurt, 1500 m, 13.VIII.2009, 3♀♀, ♂; Konya: Beyşehir, Gökçimen, 26.VII.1997, 2♀♀, Ereğli, 1020 m, 15.IX.2009, 2♂♂, Güneysınır, Gurağaç, 1017 m, 19.VII.1999, ♂; Malatya: 30.VII.1993, ♂, 9.IX.1996, ♀; Manisa: Turgutlu, 78 m, 15.VII.2009, ♂; Mersin: 16.VIII.2011, ♀, Aydıncık, 25.VII.1996, ♀, Erdemli, Üçtepe, 120 m, 10.VIII.2012, 2♂♂; Muş: 21.VII.1971, ♂; Nevşehir: 1135 m, 15.VIII.2011, ♂, Sulusaray, 25.IX.2009, ♀, ♂; Osmaniye: Kadirli, Kabayar, 17.VII.1997, ♂; Rize: Anzer, 28.VI.1996, 2♀♀; Sivas: Divriği, 25.VI.2011, ♀, Gürün, 1200 m, 5.VIII.2010, ♀, 9.VIII.2010, ♀; Trabzon: 17.VI.1990, ♂, 9.VII.1990, ♂, 10.VII.1990, ♀, 11.VII.1990, ♂, 12.VII.1990, ♀, ♂, 14.VII.1990, 2♀♀, 18.VII.1990, ♀, ♂, 28.VII.1990, 3♀♀, ♂; Tunceli: Mazgirt, 914 m, 28.VIII.2009, ♀, 3♂♂, Kalaycı, 1000 m, 25.III.2010, ♀, Meşelik, 900 m, 12.VIII.2011, ♀, 28.VIII.2011, ♀, Pülümür, Başkalecik, 1568 m, 2.VIII.2011, ♀.

Note : Holopalaeartic species. In Western Europe, recorded on a very great number of plants belonging to Asclepiadaceae, Asperaceae, Poaceae, Rosaceae (PÉRICART 1998a), in Iran on *Cannabis*, *Cynanchum vincetoxicum*, *Gossypium*, *Sinapis* (LINNAVUORI 2011).

***Melanocoryphus albomaculatus* (GOEZE, 1778)**

Material examined : Ankara: Şereflikoçhisar, 10.VIII.1983, ♀; Erzincan: Refahiye, 1500 m, 20.VI.2009, ♂; Erzurum: 15.X.1970, ♂, Palandöken, 2400 m, 1.VII.1996, ♂, Şenkaya, 1815 m, 31.VII.2010, 2♀♀, Turnalı, 1750 m, 29.VI.1989, ♀, ♂, Tortum, Derekapı, 1300 m, 5.VII.2010, ♀, ♂.

Note : Turano mediterranean.

***Paranysius fraterculus* HORVÁTH, 1895**

Material examined: Erzurum: 1900 m, 28.V.1980, ♀, 25.VII.1983, ♀, University field, 1880 m, 22.VII.2011, ♀, 1800 m, 27.VII.2010, ♀, 1850 m, 4.VIII.2008, ♂, Pasinler, 5.IX.1987, ♂.

Note: Mid and Central Asia to southern Russia, Iran, Armenia and Middle East. On *Helichrysum* and *Astragalus* in steppic biotopes (PÉRICART 1998a; LINNAVUORI 2007).

***Spilostethus pandurus* (SCOPOLI, 1763)**

Material examined: Adana: Balcalı, 13.VII.2011, 2♀♀, 27.VII.2011, ♂, 31.VII.2011, ♂, Hamzalı, 12.III.1969, ♂, Karaisalı, Kızıldağ, Akpınar, 1650 m, 22.VII.2007, 2♀♀, Narlık, 20.II.1969, ♀; Ankara: 28.VII.1997, ♀; Antalya: 28.VII.1997, ♂, Kepez, 112 m, 21.VI.2012, ♀, 22.VI.2012, ♀, ♂, 23.VI.2012, ♀, Manavgat, 7.VII.1996, ♀, 15.VII.1996, ♂, 15.VIII.1996, ♂, Serik, Nebiler, 30 m, 25.IX.2012, ♂; Burdur: 1025 m, 25.VII.2012, ♀, ♂; Denizli: Serinhisar, 1000 m, 8.VIII.2011, ♂; Elazığ: Miyadin, 1.IX.1973, ♀; Erzincan: Eriç, 10.VIII.2011, ♂, Üzümlü, 1518 m, 10.VI.2010, ♂; Erzurum: Dumlubaba, Güngörmez, 2400 m, 1.VII.2010, ♀, ♂, 2500 m, 1.VII.2010, ♂, Dutçu, 2000 m, 28.VII.2010, ♀, Palandöken, 15.VIII.1976, ♀, University field, 1800 m, 12.VIII.2010, ♂, Aşkale, Çiftlik, 1620 m, 3.VI.2010, ♂, Aziziye, Özbek, 1930 m, 5.VIII.2011, ♂, Çat, 1710 m, 3.VI.2010, ♀, İspir, 1250 m, 30.VII.2010, ♀, Narman, İncedere, Kireçli Pass, 2400 m, 31.VII.2010, ♂, Köprüköy, Ilıcasu, Topyolu, 2380 m, 17.VII.2010, ♂, Pasinler, 15.VIII.1987, ♂, Şenkaya, İkizpınar, 1589 m, 31.VII.2011, ♀, Tortum, Şelale, 850 m, 27.V.2010, ♂, Derekapı, 1540 m, 15.VI.2010, ♀; Giresun: Eynesil, 22.VIII.1994, ♂; Hatay: Denizciler, 20.VII.1990, 2♂♂, Dörtöl, Amanos Mountains, Küşne Yaylası, 1400 m, 9.VII.2009, ♀; Iğdır: Suveren, 1000 m, 23.VI.2010, ♀; İzmir: Bornova, 20.VIII.2010, ♂; Kars: Sankamış, Karakurt, TCK Çeşmesi, 1500 m, 22.VI.2010, ♂; Manisa: Yeşilkavak, 5.VIII.2011, ♀; Mersin: 16.VIII.2011, ♀, Gülnar, Demirözü, 1300 m, 27.VI.2011, ♂, Tarsus, Çamlıyayla, 25.V.1992, ♂; Muğla: Datça, Kızlan, 1.VII.1997, 2♀♀, 4.VII.1997, 6♀♀, 6.VII.1997, 4♀♀, 2♂♂, 14.VII.1997, 2♀♀; Muş: 9.X.1972, ♀; Rize: Çamlıhemşin, 1200 m, 30.VII.2000, ♂; Sanlıurfa: Ceylanpınar, 400 m, 4.II.1996, 2♀♀, 5.III.1996, ♂.

Note: Transpalearctic extending to Paleotropical and Mediterranean climatic regions. Of similar biology than *L. equestris* (PÉRICART 1998a).

***Spilostethus saxatilis* (SCOPOLI, 1763)**

Material examined: Adana: Karaisalı, Kızıldağ, Akpınar, 1650 m, 22.VII.2007, 2♂♂; Aksaray: 8.VIII.2008, ♀; Ankara: 30.VII.1997, ♀, Elvankent, 12.IX.2010, ♀; Ardahan: 29.VIII.1991, 4♀♀, 2♂♂; Burdur: Yarışlı, Yeşilova, 8.VII.1996, ♀, 9.VII.1996, ♀; Erzincan: 7.VII.1994, ♂, 1.VIII.1997, ♂, 10.IX.1997, 2♀♀, 26.IX.1994, ♂, 12.X.1967, ♂; Erzurum: 1.V.1969, ♀, 10.VII.1997, ♂, 10.IX.1997, ♀, 15.IX.1990, ♀, 11.X.1990, ♂, Akdağ, 9.VIII.1989, ♂, Dutçu, 2000 m, 24.VII.2010, ♂, Palandöken, 2400 m, 1.VII.1996, 3♀♀, ♂, 18.VII.1979, ♂, 23.VII.1996, ♀, 2200 m, 6.VIII.1996, ♀, ♂, Çat, 2250 m, 6.VIII.2010, ♀, ♂, Başköy, 2129 m, 18.VII.2012, ♀, 3♂♂, Sankaya, 1718 m, 11.VIII.2012, 2♀♀, 2♂♂, Yavı, 1840 m, 11.VIII.2012, ♂, Yaylasuyu, 2208 m, 18.VII.2012, ♂, Horasan, 1510 m, 22.VII.2010, ♂, Akçataş, 1659 m, 13.VIII.2012, 2♀♀, Çayırüzü, 1799 m, 22.VI.2012, 2♂♂, Değirmenli, 1643 m, 13.VIII.2011, ♀, 2♂♂, Dönertaş, 1907 m, 13.VIII.2012, ♀, Hacıahmet, 1823 m, 13.VIII.2012, ♀, 2♂♂, Kırkgözeler, 1760 m, 15.VI.2010, ♂, Muratbağı, 1859 m, 21.VIII.2011, 4♀♀, 2♂♂, Yeşildere, 1684 m, 28.VIII.2011, 2♀♀, Yörükatlı, 1854 m, 29.VII.2010, ♀, İspir, Güneyköy, 2024 m, 24.VII.2011, ♀, ♂, Kân, 20.VIII.1980, ♂, Madenköprübaşı, 1200 m, 20.VIII.2009, ♀, Narman, 1543 m, 30.VI.2012, ♀, Pasinler, Ağcalar, 1850 m, 22.VII.2007, ♂, Aşıtlar, 1709 m, 12.VIII.2012, ♂, Kurbançayırı, 1762 m, 12.VIII.2012, ♀, ♂, Tortum, 1650 m, 30.VIII.2012, ♀, Aksukapı, 1750 m, 5.VIII.2010, 2♀♀, Arılı, 1450 m, 5.VIII.2010, 2♀♀, 1600 m, 7.VIII.1996, ♀, ♂, Derekapı, 1300 m, 5.VII.2010, ♀; Gaziantep: 10.IX.1990, ♂; Kars: Kümbetli, 29.VII.1994, ♂, Digor, Kocaköy, 22.VIII.1997, 3♀♀; Konya: 2.VIII.1991, ♀, Güneysınır, Güragaç, 1017 m, 22.VI.1999, ♂, Meram, 7.VIII.1997, ♀; Malatya: Arapkir, 5.VII.1990, ♂; Mersin: Silifke,

21.VII.1997, 2♀♀; Sivas: Gürün, 1200 m, 15.VIII.2010, 2♀♀; Tunceli: Mazgirt, Kalaycı, 1000 m, 25.III.2010, ♂, 28.IV.2010, 2♀♀, ♂, 1200 m, 20.VII.2011, ♀, Pülümür, Sağlambaş, 1701 m, 13.VIII.2011, ♀; Yozgat: Boğazlıyan, 1050 m, 3.VIII.2010, ♀.

Note: Holomediterranean to Middle East and Mid Asia. On various plants such as Rosaceae, Apiaceae, Asteraceae (PÉRICART 1998a).

Tropidothorax leucopterus (GOEZE, 1778)

Material examined: Antalya: Manavgat, 2.VII.1996, ♀, 7.VII.1996, ♀, ♂, 10.VII.1996, 2♀♀, ♂, 5.VIII.1996, ♀, 2♂♂, 30.VIII.1996, 3♂♂, Serik, 2.VIII.1996, ♂; Artvin: Yusufeli, Işhan, 600 m, 16.VI.2010, ♀, ♂, Morkaya, 700 m, 15.VI.2010, ♀, Pamukçular, 700 m, 16.VI.2010, ♀; Erzincan: Mercan, 1381 m, 10.VI.2010, ♂; Erzurum: Oltu, Ayvalı, 700 m, 16.VI.2010, 2♀♀, Olur, Taşlıköy, 870 m, 4.VIII.2009, ♂; Iğdır: 830 m, 23.VI.2010, ♀; Manisa: Kırkağaç, Öveçler, 19 m, 28.IX.2011, ♂.

Note: Ponto mediterranean species extending to Turkmenistan and Uzbekistan. In Western Europe on Asclepiadaceae and on Ranunculaceae.

Subfamily O r s i l l i n a e

Tribe N y s i i n i

Nysius cymoides (SPINOLA, 1837)

Material examined: Adana: 20.VII.1990, 4♀♀, 4♂♂, 3.IX.1990, ♀, Kozan, 28.VII.1998, ♂, 29.VII.1984, ♀; Antalya: 2.IX.1995, ♀; Artvin: 650 m, 3.VIII.2009, ♀, Ardanuç, 573 m, 15.VI.2010, ♀, 436 m, 3.VIII.2009, ♀, Ferhatlı, 573 m, 15.VI.2010, 4♀♀, Sebzeçiler, 500 m, 16.VI.2010, 2♀♀, ♂, Soğanlı, 318 m, 3.VIII.2009, 2♀♀, Oruçlu, 247 m, 16.VI.2010, 2♀♀, Şavşat, 400 m, 16.VI.2010, 2♀♀, Yusufeli, Işhan, 600 m, 16.VI.2010, ♀, 108 m, 4.VIII.2009, 2♀♀, Morkaya, 700 m, 15.VI.2010, ♀, Pamukçular, 700 m, 16.VI.2010, ♀, ♂; Bayburt: Kopdağı, Şehitler Çeşmesi, 2344 m, 12.VIII.2009, 2♀♀, Örence, 2400 m, 12.VIII.2009, ♀, Demirözü, 1650 m, 17.VI.2010, ♀, ♂; Erzincan: Tercan, 1408 m, 10.VI.2010, 3♀♀, Üzümlü, 1518 m, 10.VI.2010, 2♀♀; Erzurum: 28.V.1980, ♂, 23.VI.1980, 2♀♀, ♂, 2.VII.1987, 4♀♀, 2♂♂, 10.VII.1987, ♀, 25.VII.1983, 3♀♀, 25.VII.1993, 2♀♀, 30.VII.1987, ♀, 10.VIII.1987, 2♀♀, 24.VIII.1987, ♀, 27.VIII.1991, ♀, 8.IX.1978, 4♀♀, ♂, Dadasköy, 1806 m, 4.VIII.2011, 3♀♀, 2♂♂, Gölet, 6.VII.1997, 2♀♀, Güzelova, 1710 m, 15.VI.2010, ♀, 1760 m, 4.VIII.2009, ♀, Karagöbek, 1977 m, 31.VII.2010, 7♀♀, 4♂♂, Palandöken, 2000 m, 8.VII.2009, ♀, 2400 m, 21.VII.2010, ♀, ♂, Tepeköy, 1873 m, 5.VIII.2011, ♀, University field, 1800 m, 15.V.2010, ♂, 13.VII.2009, 2♀♀, 22.VII.2009, ♀, 26.VII.2010, 18♀♀, 8♂♂, 26.VII.2010, ♀, 27.VII.2010, ♂, 29.VII.2009, 3♀♀, 2.VIII.1988, ♀, 2.VIII.1998, ♀, 3.VIII.1998, 2♀♀, 4.VIII.1998, ♀, 14.VIII.1998, ♀, 17.VIII.2010, ♀, 20.VIII.2010, ♀, ♂, 22.VIII.1988, ♀, 8.IX.2009, 3♀♀, Yeşildere, 2000 m, 19.VIII.2009, ♀, ♂, Aşkale, 21.VII.1989, 2♀♀, ♂, 26.VII.1989, ♀, Çayköy, 1600 m, 3.VI.2010, ♀, Çiftlik, 1620 m, 3.VI.2010, 2♀♀, Kandilli, Abdalcık, 1756 m, 1.VIII.2010, ♂, Tepebaşı, 12.VIII.1996, ♀, Aziziye, Dallıkavak Pass, 2349 m, 30.VII.2010, 3♀♀, 2♂♂, Başçakmak, 1860 m, 20.VII.2011, ♀, Eski Polat, 1857 m, 30.VII.2010, ♂, Kayapa, 1750 m, 3.VI.2010, 3♀♀, 2♂♂, Kümbet, 1836 m, 9.VIII.2011, ♀, Özbek, 1930 m, 5.VIII.2011, 2♀♀, Paşayurdu, 1710 m, 3.VI.2010, ♀, Rizekent, 2070 m, 30.VII.2010, ♀♀, Yoncalık, 1900 m, 4.VIII.2009, ♀, 2♂♂, Çat, 1710 m, 3.VI.2010, ♂, 1810 m, 3.VI.2010, 4♀♀, 2200 m, 3.VI.2010, 2♀♀, 1894 m, 29.VI.2009, 2♀♀, 1974 m, 29.VI.2009, 2♀♀, ♂, 1898 m, 6.VIII.2010, ♀, 2250 m, 6.VIII.2010, ♀, 2000 m, 2.X.2012, ♀, Çat Köyü, 1720 m, 21.VI.2011, ♂, 2098 m, 29.VI.2009, ♀, Taşlıgüneş, 2032 m, 26.VI.2009, ♀, ♂, Yaylasuyu Pass, 2322 m, 29.VI.2009, ♀, Horasan, 1580 m, 22.VI.2009, ♀, 1510 m, 22.VII.2010, ♀, ♂, 13.VIII.2009, ♀, Kırkgözeler, 1599 m, 29.VII.2010, ♂, İspir, 1300 m, 7.VIII.2009, 2♀♀, Elmalı, 1328 m, 20.VII.2011, ♀, İspir Pass, 1950 m, 20.VIII.2009, ♂, Köprüköy, 1621 m, 13.VIII.2011, ♀, Eğirmez, 1670 m, 13.VIII.2011, 2♀♀, Geyikli, 2144 m, 17.VII.2012, ♂, Ilcasu, Topyolu, 2380 m, 17.VII.2010, 3♀♀, Narman, 30.VI.1989, ♀,

12.VII.1988, ♂, 1565 m, 21.VII.2010, ♀, ♂, 1428 m, 4.VIII.2009, ♀, Dikmetaş, 2665 m, 17.VII.2010, 2♀ ♀, ♂, İncedere, Kireçli Pass, 1987 m, 21.VII.2010, 2♂♂, Kışlaköy, 1892 m, 13.VIII.2012, ♀, Oltu, 23.VI.1987, ♀, 27.VI.1987, 2♀ ♀, 2.VII.1987, 3♀ ♀, ♂, 6.VII.1989, ♀, 11.VII.1991, ♂, 16.VII.1987, ♂, 1750 m, 4.VIII.2009, ♀, 3♂♂, Başbağlar, 1923 m, 13.VII.2011, ♀, Çamlıbel, 1135 m, 21.VII.2010, ♀, ♂, Duralar, 1421 m, 30.VII.2011, ♀, Olur, Kaledibi, 1070 m, 4.VIII.2009, 3♀ ♀, 2♂♂, Taşlıköy, 860 m, 10.VIII.2011, ♀, ♂, Yeşilbağlar, 1000 m, 16.VI.2010, 2♀ ♀, Pasinler, 29.VI.1987, ♀, 2.VII.1983, ♂, 1600 m, 25.VII.2009, ♀, 15.VIII.1987, 2♀ ♀, 29.VIII.1987, ♀, Çögönder, 1737 m, 29.VII.2010, 3♀ ♀, Pazaryolu, 1010 m, 7.VIII.2009, ♀, Şenkaya, 5.VIII.1988, 2♂♂, Tekman, Çiçekdağı, 1846 m, 26.VI.2011, ♀, Tortum, Aktaş, 1765 m, 31.VII.2011, ♂, Arılı, 1450 m, 5.VIII.2010, ♀, Derekapı, 1300 m, 15.VI.2010, 2♀ ♀, 1300 m, 5.VIII.2010, ♀, Uzundere, Yayla Pass, 2300 m, 21.VII.2010, ♀; Hatay: Dörtöl, 11.X.1994, ♀, 3♂♂, Erzincan, 10.IX.1995, 3♂♂; İğdır: 23.VIII.1990, ♀; Kars: Sarıkamış, 1900 m, 13.VIII.2009, 2♀ ♀, Akkurt, 1650 m, 13.VIII.2009, ♂, Karakurt, TCK Çeşmesi, 1500 m, 29.VII.2010, 4♀ ♀, 13.VIII.2009, ♀, ♂.

Note : Holomediterranean extending to Central Europe, Mid Asia and the Sudan. *N. cymoides* is polyphagous but in Iran it is a pest of *Sorghum* (GHAHARI & MOULET 2012), known in meadows and fields (LINNAVUORI 2007) on *Onobrychis* and *Solanum tuberosum* (GHAHARI & MOULET 2012).

Nysius graminicola (KOLENATI, 1845)

Material examined : Adana: 20.VII.1990, 3♀ ♀, 5♂♂, 30.VIII.1990, ♀, Karataş, 27.VII.1984, ♂, Kozan, 28.VII.1984, 2♂♂; Artvin: Ardauç, Ferhatlı, 573 m, 15.VI.2010, ♂, Şavşat, 400 m, 16.VI.2010, 3♀ ♀, Yusufeli, Sebzeciler, 500 m, 16.VI.2010, ♂; Bayburt: Aydıntepe, Arpalı, 1550 m, 17.VI.2010, ♀, Çalidere, 1700 m, 17.VI.2010, ♀, ♂, Örence, 2400 m, 12.VIII.2009, ♀; Erzincan: Geyikli, 1160 m, 11.VI.2010, 2♀ ♀, 2♂♂, Mercan, 1381 m, 10.VI.2010, 2♂♂, Tercan, 1408 m, 10.VI.2010, ♀, ♂, Üzümlü, 1515 m, 10.VI.2010, ♂; Erzurum: 10.VI.1980, ♀, 23.VI.1980, ♀, ♂, 2.VII.1987, ♀, 5.IX.2009, 2♂♂, 8.IX.1978, ♀, Dadaşköy, 1806 m, 4.VIII.2011, 5♂♂, Güzelova, 1760 m, 15.VI.2010, ♀, Karagöbek, 1977 m, 31.VII.2010, ♀, 6♂♂, Kümbet, 1832 m, 5.VIII.2011, ♂, Palandöken, 2400 m, 21.VII.2010, 2♂♂, 2000 m, 8.VIII.2009, ♀, ♂, University field, 1850 m, 13.VII.2009, ♂, 22.VII.2009, 3♂♂, 26.VII.2010, 9♀ ♀, 15♂♂, 27.VII.2010, ♂, 29.VII.2009, ♀, ♂, 4.VIII.1998, ♂, 7.VIII.1996, ♂, 8.IX.2010, ♀, ♂, Yeşildere, 2000 m, 19.VIII.2009, ♂, Aşkale, Çiftlik, 1610, 3.VI.2010, 4♀ ♀, 5♂♂, Aziziye, Dadaşkent, 1850 m, 3.VI.2010, ♂, Paşayurdu, 1710 m, 3.VI.2010, ♀, 3♂♂, Rizekent, 2070 m, 30.VII.2010, ♂, Toprakkale, 2157 m, 30.VII.2010, 2♂♂, Çat, 1810 m, 3.VI.2010, 2♂♂, 1894 m, 29.VI.2009, ♂, Taşlıgüney, 2032 m, 26.VI.2009, 2♂♂, İspir, 1300 m, 7.VIII.2009, ♂, Güllübağ, 1725 m, 15.VII.2012, ♀, Zeyrek, 2073 m, 22.VI.2011, ♂, Köprüköy, 1621 m, 13.VIII.2011, ♂, Eğirmez, 1750 m, 13.VIII.2011, ♂, Pekecik, 1722 m, 26.VI.2011, ♀, Narman, 1428 m, 4.VIII.2009, ♂, Dikmetaş, 2665 m, 17.VII.2010, ♂, İncedere, Kireçli Pass, 1987 m, 21.VII.2010, 2♀ ♀, Kışlaköy, 1892 m, 13.VIII.2012, 2♂♂, Oltu, 2.VII.1987, ♂, 1180 m, 24.VII.2009, ♀, Çamlıbel, 1135 m, 21.VII.2010, ♀, ♂, Olur, Çoşkunlar, 1054 m, 30.VII.2011, ♂, Taşlıköy, 860 m, 10.VII.2011, 2♀ ♀, Pasinler, 29.VI.1987, ♂, 1600 m, 25.VII.2009, ♀, ♂, 15.VIII.1987, ♂, Çögönder, 1737 m, 29.VII.2010, ♂, Şenkaya, 11.VII.1988, ♀, Tekman, Kurgındere, 2200 m, 2.VII.2010, ♀, ♂, Tortum, 1573 m, 21.VII.2010, ♀, Aksukapı, 1750 m, 6.VIII.2010, ♀, Aktaş, 1765 m, 31.VII.2011, ♂; Hatay: Dörtöl, 11.X.1994, 3♂♂, Erzincan, 10.IX.1995, ♀; Kars: Sarıkamış, Karakurt, 1500 m, 13.VIII.2009, 2♂♂, TCK Çeşmesi, 1470 m, 29.VII.2010, ♂.

Note : Holomediterranean extending to central Europe, Middle East and Mid Asia. A polyphagous species.

Nysius helveticus (HERRICH-SCHÄFFER, 1850)

Material examined : Artvin: Yusufeli, İshan, 108 m, 4.VIII.2009, ♀; Erzurum: 19.VIII.1987, ♀, Aziziye, Toprakkale, 2157 m, 30.VII.2011, 5♀ ♀, 2♂♂, Horasan, Dönertaş, 2009 m, 13.VIII.2012, ♀, İspir, Çapans, 2150 m, 20.VII.2009, ♀, Elmalı, 1328 m, 20.VII.2011, ♂, İncesu, 2100 m, 20.VIII.2009, ♀, ♂, Kirazlı, 1207 m, 24.VII.2011, ♀, Oltu, Özdere, 1822 m, 6.VII.2012, ♀.

Note : Euro siberian species. In Western Europe recorded on Ericaceae and sometimes on Asteraceae (PÉRICART 1998a).

***Nysius senecionis* (SCHILLING, 1829)**

Material examined : Adana: 20.VII.1990, 2♀♀, ♂; Artvin: 650 m, 3.VIII.2009, ♀, Ardanuç, 436 m, 3.VIII.2009, ♂, Esentepe, Ormanıçı, 227 m, 3.VIII.2009, ♂, Ferhatlı, 573 m, 15.VI.2010, ♀, Yusufeli, Demirkent, 387 m, 15.VI.2010, 2♀♀, ♂, Morkaya, 700 m, 15.VI.2010, ♀, Pamukçular, 16.VI.2010, ♀; Bayburt: Çaldere, 1700 m, 17.VI.2010, ♀; Erzincan: Mercan, 1381 m, 10.VI.2010, ♀, Tercan, 1408 m, 10.VI.2010, 2♀♀; Erzurum: 25.VII.1993, ♀, ♂, Güzelyayla, 2000 m, 19.VIII.2009, ♀, Karagöbek, 1977 m, 31.VII.2010, ♀, 1993 m, 31.VII.2011, ♀, 2♂♂, Dadaşkøy, 1806 m, 4.VIII.2011, 2♀♀, 4♂♂, Taşlıgüney, 1968 m, 9.VIII.2011, ♀, University field, 1850 m, 22.VII.2009, ♀, ♂, 26.VII.2010, 2♀♀, 31.VII.1998, ♀, 2.VIII.1988, ♀, 3.VIII.1998, ♀, 4.VIII.1998, 2♂♂, 5.VIII.1998, ♀, 5.VIII.2011, ♀, 14.VIII.1998, 2♀♀, ♂, 17.VIII.1998, ♀, 19.VIII.1998, ♂, 20.VIII.2010, ♀, ♂, 23.VIII.2011, ♂, 26.VIII.1997, ♀, 5.IX.2009, ♀, ♂, Aşkale, 26.VII.1989, ♀, Çayköy, 1600 m, 3.VI.2010, ♀, Çiftlik, 1620 m, 3.VI.2010, 2♀♀, Kandilli, Atlıkonak, 1760 m, 9.VIII.2011, 2♀♀, Tepebaşı, 12.VIII.1996, ♀, Aziziye, 14.VII.1988, ♀, Ağzıaçık Pass, 2300 m, 30.VII.2010, ♂, Dadaşkent, 1850 m, 3.VI.2010, ♀, Dallıkavak Pass, 2349 m, 30.VII.2010, ♂, Kayapa, 150 m, 3.VI.2010, ♀, Paşayurdu, 1710 m, 3.VI.2010, ♀, Çat, 1710 m, 3.VI.2010, ♀, 1974 m, 29.VI.2009, 3♀♀, 2250 m, 6.VIII.2010, ♀, Yukarı Çat, 2162 m, 23.VII.2011, ♀, ♂, Horasan, 1580 m, 22.VI.2009, 3♀♀, İspir, 1230 m, 22.VI.2011, 2♀♀, İncesu, 2100 m, 20.VIII.2009, ♀, Narman, 30.VI.1989, ♂, 12.VII.1988, ♀, Dikmetaş, 2665 m, 17.VII.2010, ♂, İncedere, Kireçli Pass, 1987 m, 21.VII.2010, ♀, Oltu, 1180 m, 24.VII.2009, ♀, ♂, Olur, Kaledibi, 1070 m, 4.VIII.2009, ♂, Taşlıköy, 885 m, 6.VII.2012, ♀, Pasinler, 1600 m, 7.VII.2009, ♀, ♂, Çöğender, 1737 m, 29.VII.2010, ♀, Şenkaya, 5.VIII.1988, ♀, 11.VIII.1988, ♀, Hoş, 1193 m, 31.VII.2011, ♀, Tekman, Çiçekdağı, 1846 m, 26.VI.2011, ♀, Uzundere, 1052 m, 21.VII.2012, ♀; Hatay: Dörtöl, 14.X.1994, ♀; Kars: 1781 m, 23.VI.2009, 2♀♀, ♂, 2.VIII.1989, ♀, Sankamış, Akkurt, 1650 m, 13.VIII.2010, ♀, Karakurt, TCK Çeşmesi, 13.VIII.2009, 2♀♀.

Note : Transpalaeartic known in Tropical and South Africa. On various Asteraceae, particularly of the genus *Senecio* (PÉRICART, 1998a).

***Nysius thymi* (WOLFF, 1804)**

Material examined : Adana: 20.XII.1990, ♀; Artvin: Oruçlu, 247 m, 16.VI.2010, ♀, Yusufeli, İşhan, 108 m, 4.VIII.2009, ♀; Bayburt: 1550 m, 12.VIII.2009, ♂; Erzincan: Mercan, 1381 m, 10.VI.2010, 2♂♂; Erzurum: Abdurrahmangazi, 2190 m, 27.VII.2010, ♀, University field, 1850 m, 22.VII.2009, ♀, 27.VII.2010, ♂, 3.VIII.1998, ♀, 4.VIII.1998, 2♀♀, 13.VIII.1998, ♀, Aziziye, Ağzı Açık Pass, 2300 m, 30.VII.2010, ♀, Toprakkale, 2157 m, 30.VII.2010, 6♀♀, 4♂♂, Çat, 1710 m, 3.VI.2010, ♂, Aşağı Çat, 2106 m, 6.VIII.2010, ♂, Horasan, 1580 m, 22.VI.2009, ♀, İspir, Çapans, 2150 m, 20.VIII.2009, ♂, İncesu, 2100 m, 20.VIII.2009, 2♀♀, ♂, Köprüköy, Ilıcasu, 2380 m, 17.VII.2010, ♂, Şenkaya, 11.VIII.1988, ♂, Hoş, 1193 m, 31.VII.2011, ♂; Hatay: Dörtöl, 11.X.1994, ♀, Erzincan, 27.VIII.1995, ♀.

Note : Holarctic species. On several Fabaceae, Caryophyllaceae, Paronychiaceae and Asteraceae (PÉRICART 1998a).

Tribe Orsillini

***Ortholomus punctipennis* (HERRICH-SCHÄFFER, 1838)**

Material examined : Erzurum: 26.VII.1983, ♀, Abdurrahmangazi, 2190 m, 27.VII.2010, ♀, ♂, 2197 m, 1.VIII.2010, 2♀♀, 2♂♂, Palandöken, 2135 m, 1.VII.2010, ♀, 2140 m, 1.VIII.2010, ♂, 2300 m, 1.VIII.2010, ♀, University field, 1850 m, 26.VII.2010, ♀, 20.VIII.2010, ♀, 8.IX.2009, ♀, Aşkale, 1600 m, 12.VIII.2009, ♀, Kandilli, 1710 m, 1.VIII.2010, ♀, Karahasan,

1758 m, 11.VIII.2012, 2♂♂, Aziziye, Yoncalık, 1900 m, 4.VIII.2009, ♀, ♂, Çat, 2250 m, 6.VIII.2010, 2♀♀, ♂, Aşağı Çat, 1950 m, 6.VIII.2010, ♀, 2106 m, 6.VIII.2010, ♀, ♂, Horasan, Aşağı Çamlıkale, 2242 m, 13.VIII.2012, 2♀♀, Çayırüzü, 1794 m, 21.VIII.2011, ♀, ♂, İspir, Çayırüzü, 1947 m, 4.VIII.2012, 4♀♀, ♂, Elmalı, 1328 m, 20.VII.2011, ♀, ♂, Oltu, 2035m, 5.VIII.2010, 3♀♀, Pasinler, Acı, 1905 m, 22.VII.2012, ♀, Şenkaya, 1815 m, 31.VII.2010, ♀, ♂, Tortum, Aksukapı, 1750 m, 5.VIII.2010, ♀, Derekapı, 1285 m, 5.VIII.2010, ♀; *Sivas*: Kızılırmak, 1185 m, 5.VIII.2012, ♂.

Note : Euro siberian species. On Rosaceae, Chenopodiaceae, Fabaceae, Lamiaceae (PÉRICART 1998a).

Family *Oxycarenidae*

Auchenodes costalis (LETHIERRY, 1877)

Material examined : *Erzurum*: Aşkale, Atlıkonak, 1760 m, 9.VIII.2011, 2♀♀, Küçükova, 1896 m, 5.VII.2012, 2♀♀.

Note : Known in Iberic peninsula, Balkanic Peninsula, Pontian Region, Near East. In Anatolia under *Matricaria* (Asteraceae) (PÉRICART 1998b).

Macroplox fasciata (HERRICH-SCHÄFFER, 1835)

Material examined : *Erzincan*: 27.V.1991, ♂, 31.VII.1991, ♂; *Erzurum*: Olur, Taşlıköy, 862 m, 16.VI.2010, ♀, Pazaryolu, Çiftepınar, 1742 m, 15.VII.2012, ♂, Uzundere, 1147 m, 7.VIII.2011, ♀.

Note : Holomediterranean species. In Western Europe on Cistaceae (*Cistus* and *Helianthemum*) (PÉRICART 1998b).

Metoplox origani (KOLENATI, 1845)

Material examined : *Antalya*: 7.VII.1984, ♂; *Bayburt*: 1569 m, 22.VI.2009, ♀; *Bursa*: Kemalpaşa, 1.VIII.1984, ♂; *Erzurum*: 25.VII.1993, ♀, Dumlubaba, Güngörmez, 2500 m, 1.VIII.2010, ♀, Aşkale, Çayköy, 1600 m, 1600 m, 3.VI.2010, ♀, Hatuncuk, 1869 m, 5.VII.2012, ♂, Aziziye, Gelinkaya, 1796 m, 24.VI.2012, 7♀♀, 3♂♂, Kayapa, 1750 m, 3.VI.2010, ♀, Ortabahçe, 1763 m, 5.VII.2012, 6♀♀, 2♂♂, Paşayurdu, 1710 m, 3.VI.2010, ♂, Rizekent, 2088 m, 24.VI.2012, ♀, 3♂♂, Çat, 1810 m, 3.VI.2010, ♂, 2200 m, 3.VI.2010, ♀, 1913 m, 23.VII.2011, 2♀♀, ♂, Taşlıgüney, 2032 m, 26.VI.2009, ♀, Tuzla, 1926 m, 21.VI.2011, ♀, 2♂♂, Yaylasuyu, 2322 m, 29.VI.2009, 3♀♀, 2♂♂, 2331 m, 9.VIII.2011, ♀, ♂, Yukarı Çat, 2162 m, 23.VII.2011, 3♀♀, ♂, Horasan, Değirmenli, 1608 m, 22.VI.2012, ♂, İspir, Zeyrek, 2073 m, 22.VI.2011, ♂, Karayazı, Aşağı İncesu, 2098 m, 17.VII.2012, 4♂♂, Köprüköy, Ataköy, 1788 m, 17.VI.2012, ♂, Örentaş, 2038 m, 29.VII.2010, ♂, Narman, Samikale, 1541 m, 30.VII.2011, ♂, Şenkaya, İçmesu, 1656 m, 14.VII.2012, 2♀♀, 5♂♂; *Iğdır*: Tuzluca, 900 m, 16.VI.2009, ♂; *Kars*: Sankamış, 1900 m, 13.VIII.2009, ♀.

Note : Holomediterranean extending to Mid Asia. On Asteraceae (LINNAVUORI 2007).

Microplex interrupta (FIEBER, 1837)

Material examined : *Erzurum*: Çat, Yukarı Çat, 2162 m, 23.VII.2011, ♂.

Note . A turano mediterranean species known until Kazakhstan and Kirghizia. In Western Europe, mainly on Asteraceae, also mentioned (but rarely) on Lamiaceae, Crassulaceae (PÉRICART 1998b).

***Oxycaenus (Euoxycareus) pallens* (HERRICH-SCHÄFFER, 1850)**

Material examined: Bayburt: 1569 m, 22.VI.2009, ♂, Aydıntepe, Arpalı, 1550 m, 17.VI.2010, ♂; Erzincan: 27.V.1991, 2♂♂, 1185 m, 10.VI.2010, 2♀♀, 2♂♂, 30.VII.1991, 2♀♀, Akyazı, 1202 m, 11.VI.2010, ♂, Bahçeli, 28.V.1991, ♀, Geyikli, 1160 m, 11.VI.2010, 2♀♀, 2♂♂, Mercan, 1381 m, 10.VI.2010, 2♀♀, 11.VII.1990, ♂, Tercan, 1408 m, 10.VI.2010, ♀; Erzurum: Tepeköy, 1873 m, 5.VIII.2011, ♀, University field, 1850 m, 25.VI.2009, 2♀♀, 2♂♂, Aşkale, 1600 m, 8.VII.2009, 2♀♀, 12.VIII.2009, ♂, Çayköy, 1600 m, 3.VI.2010, ♀, Gökçebük, 1699 m, 23.VII.2011, ♀, Aziziye, Başçakmak, 1860 m, 20.VII.2011, 2♀♀, 2♂♂, Dadaşkent, 1800 m, 3.VI.2010, 2♀♀, 2♂♂, Eskipolat, 1748 m, 20.VII.2011, ♀, Yoncalık, 1900 m, 4.VIII.2009, ♂, Hınıs, 1955 m, 26.VI.2011, ♀, 1742 m, 2.VII.2010, 3♀♀, ♂, Akören, 1828 m, 16.VII.2011, ♀, Parmaksız, 1808 m, 2.VII.2009, ♀, Horasan, Dalbaşı, 1601 m, 17.VII.2011, ♀, Kırkdikme, 1601 m, 29.VII.2010, ♀, İspir, Elmalı, 1328 m, 20.VII.2011, ♂, Madenköprübaşı, 17.VII.1992, ♀, ♂, Karaçoban, Bozyar, 1615 m, 16.VII.2011, 2♂♂, Köprüköy, Ataköy, 1788 m, 26.VI.2011, ♂, Narman, 1428 m, 4.VIII.2009, 2♀♀, Araköy, 1472 m, 23.VI.2011, 2♀♀, Beyler, 1710 m, 8.VI.2012, ♀, Göllü, 1083 m, 30.VII.2011, ♂, Oltu, 1455 m, 17.VII.2009, ♀, 1180 m, 24.VII.2009, 2♀♀, 1750 m, 4.VIII.2009, ♀, 2♂♂, Yolboyu, 1229 m, 4.VIII.2009, 3♀♀, 2♂♂, Pasinler, Espemce, 1666 m, 21.VIII.2011, ♀, ♂, Pazaryolu, 1450 m, 24.VII.2011, 2♀♀, Tekman, Körsu, 1901 m, 16.VII.2011, 3♀♀, 2♂♂, Tortum, 1660 m, 31.VII.2011, ♂; İğdır: 850 m, 20.VI.2009, ♀, Bayraktar, 850 m, 23.VI.2010, ♂, Karakoyunlu, Taşburun, 830 m, 23.VI.2010, ♂, Tuzluca, Menderes, 1100 m, 23.VI.2010, ♀.

Note: Holomediterranean species extending to Mid Asia, Indian subcontinent and the Sudan. On *Centaurea* (PÉRICART 1998b; HEISS 2002; LINNAVUORI 2007) and other Asteraceae.

***Oxycaenus (Oxycaenus) hyalinipennis* (A. COSTA, 1843)**

Material examined: Adana: Kozan, 5.VIII.1995, ♂, 15.IX.1984, ♀, 24.IX.1984, ♀, ♂; İstanbul: Erenköy, 14.VIII.1984, ♂; Mersin: Tarsus, 27.VII.1984, ♀; Osmaniye: 24.VIII.1984, ♂.

Note: Palearctic. On several Malvaceae, a pest of the cotton (PÉRICART 1998b).

Family Pachygronthidae**Tribe Teracriini*****Cymophyes ochroleuca* FIEBER, 1870**

Material examined: Antalya: 5.VIII.1984, ♀.

Note: Ponto mediterranean. On Poaceae in salty biotopes (PÉRICART 1998a), in Iran on *Aeluropus litoralis* and *Panicum turgidum* (Poaceae) (LINNAVUORI 2011).

Family Rhyparochromidae**Subfamily Rhyparochrominae****Tribe Drymini*****Drymus (Sylvadrymus) brunneus confinis* REUTER, 1893**

Material examined: Erzincan: Mercan, 25.VI.1990, 2♀♀; Erzurum: Kümbet, 11.VII.1990, ♂, University field, 13.V.2009, ♀, Aşkale, Çayköy, 1600 m, 3.VI.2010, ♀.

Note: Cited from Anatolia, Taurus mounts, Iskenderun, Bürücek, Pozantı, Antakya,

Namrun, Ovacık (PÉRICART 1998b). The validity of this subspecies is doubtful according to (PÉRICART 1998b). Known in the Maghreb, Spain, Italy, Macedonia, Cyprus, Turkey, Pakistan and Czech Republic (PÉRICART 1998b).

***Drymus (Sylvadrymus) sylvaticus* (FABRICIUS, 1775)**

Material examined: Erzurum: University field, 1800 m, 18.VIII.2010, ♀.

Note: Feeding habits are unknown, probably feeds upon mooses and parasitic mushrooms (PÉRICART 1998c), this author reports that the breeding of larvae has been tried successfully with seeds of Urticaceae, Ericaceae, Chenopodiaceae; euro Siberian until Central Asia and Japan (PÉRICART 1998c).

***Gastrodes grossipes* (DE GEER, 1773)**

Material examined: Erzurum: 1853 m, 17.VIII.2010, ♂, University field, 1850 m, 15.V.2010, ♂, 20.V.2009, ♂, 3.VI.2009, 2♀♀, Aşkale, Çiftlik, 1620 m, 3.VI.2010, ♀.

Note: Euro siberian species; a subspecies (*japonicus*) lives in Far East. On several *Pinus* and on *Larix* (Pinaceae) (PÉRICART 1998b).

***Scolopostethus affinis* (SCHILLING, 1829)**

Material examined: Erzurum: University field, 1850 m, 5.IX.2009, ♀.

Note: Euro siberian extending to Saudi Arabia. In Western Europe feeds on seeds of *Betula*, *Urtica*, *Fagus*, *Erica* (PÉRICART 1998b).

Tribe G o n i a n o t i n i

***Aphanus rolandri* (LINNAEUS, 1758)**

Material examined: Erzurum: 18.VIII.1979, ♀.

Note: Europe (incl. Scandinavia), and the Mediterranean basin (except Libya and Egypt) (PÉRICART 1998c); on the ground where it sucks fallen seeds.

***Emblethis denticollis* HORVÁTH, 1878**

Material examined: Adana: Kozan, 8.X.1983, ♀; Ankara: 13.VIII.1995, ♀, Yenimahalle, 17.VII.1995, ♀; Erzurum: 18.VIII.1979, ♂, Dadaşköy, 1806 m, 4.VIII.2011, ♂, Kümbet, 1832 m, 5.VIII.2011, ♀, Palandöken, 2400 m, 1.VII.1996, ♀, University field, 1850 m, 18.V.2007, 2♀♀, 15.VI.2007, ♂, Aşkale, 1600 m, 8.VII.2009, ♀, Aziziye, Gelinkaya, 1796 m, 24.VI.2012, ♂, Çat, 1810 m, 3.VI.2010, ♀, 2250 m, 6.VIII.2010, ♂, Horasan, Kızılarkale, 1953 m, 22.VI.2012, ♀, Yörükaltı, 1854 m, 29.VII.2010, ♀, Oltu, 21.VII.1981, 2♀♀, 2♂♂, Pasinler, 1.VIII.1986, 2♀♀, Ovaköy, 1803 m, 3.VII.2011, ♀, Karayazı, Çatalören, 2313 m, 16.VII.2011, ♀, Köprüköy, Marifet, 1685 m, 16.VI.2012, 5♀♀, ♂; Karabük: Safranbolu, 20.VIII.1994, ♀.

Note: Euromediterranean extending to Central Asia and Pakistan.

***Emblethis osmanus* SEIDENSTÜCKER, 1963**

Material examined: Erzurum: Hınıs, 1742 m, 2.VII.2010, ♂, Oltu, 21.VII.1981, ♂; Elazığ: 1067 m, 27.VII.1995, ♀; İzmir: Çınarlı, 12.VIII.1984, ♀; Karabük: Safranbolu,

20.VIII.1994, ♀, ♂; Konya: Ereğli, 1020 m, 15.IX.2009, 2♀♀; Manisa: Saruhanlı, 14.VIII.1984, ♂; Mersin: Erdemli, 25.VII.1996, ♀, Silifke, 30.VII.1984, 2♂♂.

N o t e : Asia part of Turkey, Syria, Iran, Tajikistan.

***Pterotmetus staphyliniformis* (SCHILLING, 1829)**

M a t e r i a l e x a m i n e d : Aksaray: 15.VII.1996, ♀; Erzurum: Horasan, Çayırözü, 1794 m, 21.VIII.2011, ♂.

N o t e : Transpalearctic; in woody biotopes on Apiaceae, Poaceae, Ericaceae, Lamiaceae (PÉRICART 1998c).

Tribe M e g a l o t i n i

***Lasiocoris anomalus* (KOLENATI, 1845)**

M a t e r i a l e x a m i n e d : Erzurum: Tortum, Pehlivanlı, 12.VII.1992, ♀.

N o t e : Ponto mediterranean extending to Mid Asia.

Tribe M e g a l o n o t i n i

***Megalonotus sabulicola* (THOMSON, 1870)**

M a t e r i a l e x a m i n e d : Erzurum: University field, 1890 m, 20.VI.2012, ♂, Tortum, Taşbaşı, 1968 m, 6.VII.2012, ♀.

N o t e : Holarctic.

Tribe M y o d o c h i n i

***Paromius gracilis* (RAMBUR, 1839)**

M a t e r i a l e x a m i n e d : Erzurum: University field, 1850 m, 24.VII.1966, ♂.

N o t e : Paleotropical extending to Mediterranean basin. On Poaceae (*Andropogon*, *Imperatra*) (PÉRICART 1998c).

***Remaudiereana annulipes* (BAERENSPRUNG, 1859)**

M a t e r i a l e x a m i n e d : Adana: 20.VIII.1990, ♀, Karataş, 17.VII.1984, ♂, 19.VII.1984, ♂, Kozan, 25.IX.1984, ♂.

N o t e : Paleotropical extending to mediterranean Europe. On Halophites (PÉRICART 1998c) but not always (MOULET 2011).

Tribe R h y p a r o c h r o m i n i

***Aellopus atratus* (GOEZE, 1778)**

M a t e r i a l e x a m i n e d : Ankara: Kalecik, Kızılırmak, 825 m, 17.IX.2011, ♂; Konya: Güneysınır, Örenboyalı, 1020 m, 28.II.2002, 2♀♀.

N o t e : Palaearctic except Scandinavia and Great Britain. Under *Echium*, *Cynoglossum*, *Anchusa* (Boraginaceae) or *Alyssum* (Brassicaceae) (PÉRICART 1998c).

***Beosus maritimus* (SCOPOLI, 1763)**

Material examined: Adıyaman: 12.VII.1990, ♀, 21.VII.1990, ♂; Ankara: 13.VIII.1995, ♂; Antalya: Kepez, Odabaşı, 305 m, 28.VII.2012, ♂; Çankırı: Eskipazar, 11.IX.1984, ♀; Erzurum: University field, 1850 m, 3.V.2007, ♂, 24.VII.2007, ♂, Oltu, Kurupınar, 1200 m, 23.VII.2010, ♀, Olur, Kaledibi, 1057 m, 4.VIII.2009, ♀, Ormanağzı, 960 m, 5.VIII.2012, ♂, Taşlıköy, 860 m, 10.VII.2011, ♂, Pasinler, 1600 m, 2.VII.2010, ♀, Tortum, Suyatağı, 1184 m, 21.VIII.2012, ♂; Giresun: Keşan, Güneyköy, 315 m, 14.VII.2012, ♂; Manisa: Kırkağaç, Boztoprak, 150 m, 24.IX.2011, ♂.

Note: A ponto mediterranean species. In Western Europe on (or under) *Artemisia*, *Silene*, *Erodium*, *Trifolium*, *Medicago* (PÉRICART 1998c).

***Beosus quadripunctatus* (MÜLLER, 1766)**

Material examined: Artvin: Yusufeli, İshan, 5.V.1978, ♂; Erzurum: Oltu, 1180 m, 24.VII.2009, ♀, Tuzlaköy, 1109 m, 30.VII.2011, ♂, Olur, Kaledibi, 1057 m, 4.VIII.2009, 2♂♂, Ormanağzı, 955 m, 10.VII.2011, ♀, Taşlıköy, 870 m, 4.VIII.2009, 2♀♀, 4♂♂, Tortum, Pehlivanlı, 1179 m, 14.VIII.2012, ♂; İğdır: Aralık, 2.VIII.1997, ♀.

Note: Euro mediterranean and Turanian.

***Graptopeltus lynceus* (FABRICIUS, 1775)**

Material examined: Tunceli: Mazgirt, Kalaycı, 950 m, 24.V.2011, ♂.

Note. Ponto mediterranean; on Boraginaceae, Brassicaceae and on fallen seeds (PÉRICART 1998c).

***Peritrechus geniculatus* (HAHN, 1832)**

Material examined: Erzurum: Palandöken, 2155 m, 22.VII.2012, 2♀♀, University field, 1850 m, 9.VII.2007, ♀, Çat, Tuzlaköy, 1926 m, 21.VI.2011, ♂, Köprüköy, Marifet, 1685 m, 16.VI.2012, ♀, Pasinler, Demirdöven, 1727 m, 29.VII.2010, ♀, Tortum, Taşbaşı, 1816 m, 9.VII.2011, ♀.

Note: Euro siberian extending to mediterranean.

***Peritrechus gracilicornis* PUTON, 1877**

Material examined: Artvin: 650 m, 3.VIII.2009, 2♀♀; Erzurum: Palandöken, 2400 m, 20.VII.1996, ♀, Çat, Yarmak, 1876 m, 11.VIII.2012, ♂, İspir, 1300 m, 7.VIII.2009, ♀, ♂, Madenköprübaşı, 1244 m, 24.VI.2012, ♀, 1245 m, 4.VIII.2012, ♀, Köprüköy, Eyüpler, 1745 m, 26.VI.2011, ♀, Narman, Ünlükaya, 1700 m, 8.VI.2012, ♂, Oltu, Çamlıbel, 1775 m, 13.VII.2011, ♀, Özdere, 1822 m, 6.VII.2012, ♀, Olur, 1225 m, 10.VI.2012, 3♀♀, Ormanağzı, 960 m, 6.VII.2012, 2♀♀, Pazaryolu, 1445 m, 20.VII.2011, ♂, Göztepe, 1672 m, 15.VII.2012, ♀, Kümbettepe, 1376 m, 24.VI.2012, ♀, Şenkaya, Hoş, 1193 m, 10.VI.2012, 3♀♀, Penek, 1145 m, 10.VI.2012, ♀, 2♂♂, Tekman, Körsu, 1984 m, 26.VI.2011, ♂, Tortum, 1400 m, 28.V.2009, ♂, Aksukapı, 1648 m, 10.VI.2012, 2♂♂, Taşbaşı, 1816 m, 9.VII.2011, 2♂♂, Uzundere, 1147 m, 7.VIII.2011, ♀, 3♂♂, Çamlıyamaç, 1282 m, 14.VIII.2012, ♂, Dikyar, 1133 m, 14.VIII.2012, ♀, Gölbaşı, 1150 m, 14.VI.2012, ♀, Şelale, 1000 m, 9.VI.1996, ♀, Yedigöller, 855 m, 7.VI.2012, 2♀♀; İğdır: Tuzluca, 900 m, 18.VI.2009, ♀, ♂.

Note: Euro mediterranean and Turanian, on *Medicago sativa* (GHAHARI & MOULET 2012).

***Raglius confusus* (REUTER, 1886)**

Material examined: Erzincan: Üzümlü, 1518 m, 10.VI.2010, ♀; Erzurum: Tortum, Arılı, 1450 m, 5.VIII.2010, ♀; İstanbul: Bakırköy, Şile, 126 m, 16.VII.2010, ♀, ♂, Gaziosmanpaşa, Tayakadın, 93 m, 11.VIII.2010, 2♀♀; Tunceli: Mazgirt, Kalaycı, 10.V.2011, ♀.

Note: Euro mediterranean extending to Central Europe.

***Rhyparochromus pini* (LINNAEUS, 1758)**

Material examined: Adana: Kozan, 29.VII.1984, ♀; Ankara: Elmadağ, 20.VIII.1990, ♀; Kalecik, Kızılırmak, 625 m, 17.IX.2011, ♀; Erzincan: 29.VIII.1991, ♂, Cevizli, 4.VIII.1990, ♂; Erzurum: 23.VI.1980, ♀, Abdurrahmangazi, 2197 m, 1.VIII.2010, ♀, 2♂♂, Palandöken, 2400 m, 23.VII.1996, ♀, 2200 m, 6.VIII.1996, ♂, University field, 1850 m, 15.V.2010, ♀, 18.V.2007, ♂, 24.VI.2009, ♀, 30.VI.2009, ♀, Şenyurt, 2300 m, 18.VII.1988, ♀, Aşkale, Çayköy, 1876 m, 23.VII.2011, ♀, Merdiven, 1710 m, 1.VIII.2010, ♀, ♂, Aziziye, Rizekent, 2088 m, 24.VI.2012, ♀, Çat, 2250 m, 6.VIII.2010, ♀, Aşağı Çat, 1950 m, 6.VIII.2010, ♂, Tuzluca, 1950 m, 6.VIII.2010, ♂, Yukarı Çat, 2110 m, 21.VI.2011, 3♀♀, İspir, Çapans, 2150 m, 20.VIII.2009, ♀, Elmalı, 1328 m, 20.VII.2011, ♂, Madenköprübaşı, 1200 m, 20.VIII.2009, ♀, Narman, 1565 m, 21.VII.2010, ♂, İncedere, Kireçli Pass, 1987 m, 21.VII.2010, ♂, 23.VI.1996, ♀, Oltu, 1455 m, 17.VII.2010, 2♂♂, Pasinler, 25.VII.1983, 2♀♀, 3♂♂, Rabat, 2400 m, 29.VI.1996, ♀, Pazaryolu, 1453 m, 30.VII.2010, ♀, 1010 m, 7.VIII.2009, ♂, Tortum, 1573 m, 21.VII.2010, ♀, 1518 m, 31.VII.2010, ♀, 1750 m, 12.VIII.1998, ♂, Arılı, 1600 m, 7.VIII.1996, ♂, Aşağı Meydanlar, 7.VIII.1996, ♀, Derekapı, 1285 m, 5.VIII.2010, ♂; Kars: Kağızman, 1.V.1969, ♀, 3♂♂, Sarıkamış, Karakurt, 1500 m, 13.VIII.2009, ♂; Mersin: Erdemli, Üçtepe, 120 m, 17.IX.2012, ♀, Tarsus, 22.VII.1984, ♂.

Note: Euro siberian. Feeds upon seeds of Lamiaceae, Asteraceae, Brassicaceae (PÉRICART 1998c).

***Rhyparochromus phoeniceus* (ROSSI, 1794)**

Material examined: Erzurum: Yeşilyayla, 1950 m, 1.VII.2010, ♂, Aşkale, Koşapınar, 1866 m, 18.VII.2012, ♀, ♂, Horasan, Dönertaş, 1907 m, 13.VIII.2012, 2♂♂, 2009 m, 13.VIII.2012, ♂, İspir, Petekli, 1201 m, 24.VI.2012, ♀, ♂, Pazaryolu, 1430 m, 4.VIII.2012, ♀, 2♂♂.

Note: Ponto mediterranean.

***Rhyparochromus sanguineus* (DOUGLAS & SCOTT, 1868)**

Material examined: Erzincan: Mercan, 1381 m, 10.VI.2010, ♀; Erzurum: Dumlulu, 1800 m, 28.VII.1994, ♂, University field, 1850 m, 15.V.2010, 2♀♀, İspir, Madenköprübaşı, 7.VII.1996, ♀; Tunceli: Mazgirt, Kalaycı, 1000 m, 25.III.2010, ♀.

Note: Central and southern europe extending to Turkey, Caucasus, Iran, Turkmenistan, Israel.

***Rhyparochromus vulgaris* (SCHILLING, 1829)**

Material examined: Adana: Kozan, 29.VII.1984, ♀; Erzincan: Çakırman, 28.VIII.1991, ♂, Üzümlü, 28.V.1991, ♀; Erzurum: Aşkale, Koşapınar, 1866 m, 18.VII.2012, ♂, Horasan, Dönertaş, 1907 m, 13.VIII.2012, ♀, Narman, 1900 m, 4.VIII.2009, ♀, Oltu, Sarısaz, 1421 m, 30.VIII.2012, ♀, Olur, Ormanağzı, 960 m, 5.VIII.2012, ♂, Tortum, Arılı, 1428 m, 30.VIII.2012, ♀, Derekapı, 1285 m, 5.VIII.2010, ♂, Pehlivanlı, 1179 m, 14.VIII.2012, ♀, ♂; Tunceli: Mazgirt, Kalaycı, 950 m, 24.V.2011, 2♀♀, Meşelik, 900 m, 12.VIII.2011, ♀.

Note: Central and southern Europe extending to Turkey, Caucasus, Iran, Turkmenistan and Israel.

Xanthochilus quadratus (FABRICIUS, 1798)

Material examined: Antalya: 2.VIII.1984, ♀, Serik, 85 m, 29.VI.2010, ♀; Bayburt: Kopdağı, 2344 m, 12.VIII.2009, ♀; Erzincan: 1185 m, 10.VI.2010, ♀; Erzurum: 23.VI.1980, ♀, 26.VII.1983, ♂, 9.VIII.1967, ♀, 18.VIII.1967, ♀, ♂, Abdurrahmangazi, 2170 m, 22.VI.2012, ♀, ♂, Aşkale, Küçükgeçit, 1660 m, 19.VI.2012, 2♀♀, Dumlubaba, 2400 m, 1.VIII.2010, ♂, Güngörmez, 2400 m, 1.VII.2010, ♀, Güzelyayla, 2200 m, 25.VI.2010, ♀, Karagöbek, 1961 m, 16.VII.2012, 2♀♀, Palandöken, 2155 m, 22.VII.2012, 2♂♂, 2400 m, 23.VII.1996, ♀, University field, 1850 m, 1.VI.2009, ♀, 2.VI.2009, ♀, ♂, 3.VI.2009, ♀, 5.VI.2009, ♂, 20.VI.2012, ♂, 22.VI.2007, 2♀♀, ♂, 28.VI.2007, 3♀♀, 2.VII.2009, ♀, 5.VII.2007, ♀, 5.VII.2009, ♀, ♂, 22.VII.2009, ♀, 22.VII.2011, ♀, 27.VII.2007, 2♀♀, 5.VIII.2010, ♀, 18.VIII.2010, ♀, 20.VIII.2010, ♂, 1890 m, 23.VIII.2011, ♂, 14.IX.2007, 3♀♀, Yarımca, 1950 m, 20.VII.2010, ♀, Aşkale, 1600 m, 8.VII.2009, ♂, Çayköy, 1600 m, 3.VI.2010, ♀, Çiftlik, 1620 m, 3.VI.2010, ♂, Gölören, 1897 m, 18.VII.2012, ♀, Hatuncuk, 1869 m, 5.VII.2012, 3♀♀, Yeniköy, 1905 m, 19.VI.2012, 2♀♀, Aziziye, Başçakmak, 1860 m, 20.VII.2011, ♀, Kayapa, 1750 m, 3.VI.2010, ♂, Paşayurdu, 1710 m, 3.VI.2010, ♂, Çat, 1974 m, 29.VI.2009, ♀, Aşağı Çat, 2065 m, 21.VI.2011, ♂, 1950, 6.VIII.2010, ♀, Başköy, 2129 m, 18.VII.2012, ♀, Çat Köyü, 2098 m, 29.VI.2009, ♂, Çirşli, 2198 m, 18.VI.2012, ♂, 1876 m, 23.VII.2011, ♀, Güzelyurt, 2117 m, 9.VIII.2011, ♀, Köşeler, 1942 m, 18.VI.2012, ♂, Tuzlaköy, 1926 m, 21.VI.2011, 2♀♀, Yaylasuyu, 2208 m, 18.VII.2012, ♀, Horasan, Değirmenli, 1608 m, 22.VI.2012, ♀, ♂, Kırkgözeler, 1760 m, 15.VI.2010, ♂, Muratbağı, 1852 m, 22.VI.2012, ♂, 1859 m, 21.VIII.2011, ♀, Yörükaltı, 1854 m, 29.VII.2010, ♂, Karayazı, Alemdağı, 2022 m, 16.VI.2012, 2♀♀, 2♂♂, Kırğındere, 2200 m, 17.VI.2012, ♀, Yeniköy, 2199 m, 17.VI.2012, 2♂♂, Köprüköy, Eğirmez, 1670 m, 16.VI.2012, ♂, Eyüpler, 1745 m, 26.VI.2011, ♂, Merifet, 1685 m, 16.VI.2012, ♂, Narman, 1543 m, 30.VI.2012, 2♂♂, 1900 m, 24.VII.2009, ♀, Beyler, 1710 m, 8.VI.2012, ♂, İncedere, Kireçli Pass, 25.VI.1996, ♀, Şehitler, 1884 m, 16.VI.2012, ♂, Ünlükaya, 1700 m, 8.VII.2012, 3♀♀, Oltu, İğdeli, 1660 m, 30.VI.2012, ♀, 2♂♂, Orcuk, 1556 m, 10.VI.2012, ♀, Özdere, 1822 m, 6.VII.2012, ♂, Olur, Sungübayır, 1650 m, 10.VI.2012, 2♂♂, Yeşilbağlar, 1000 m, 16.VI.2010, ♂, Pasinler, Acı, 1905 m, 22.VII.2012, ♀, Büyüktüy, 1800 m, 2.VII.2010, ♀, Şenkaya, Gözebaşı, 1794 m, 14.VII.2012, ♀, ♂, Penek, 1145 m, 10.VI.2012, 2♀♀, ♂, Tekman, Geyikli, 2185 m, 16.VII.2011, ♀, Hacıömer, 1825 m, 17.VI.2012, 2♀♀, Tortum, Aksukapı, 1750 m, 6.VIII.2010, 2♀♀, Aşağı Sivri, 1546 m, 16.VI.2012, ♀, Yukarı Sivri, 1500 m, 8.VI.2012, ♂; Iğdır: Tuzluca, 900 m, 18.VI.2009, 2♀♀, 2♂♂; Kars: Kağızman, 1.V.1969, ♂, Sankamış, 1900 m, 13.VIII.2009, ♂; Mersin: Erdemli, Kocahasanlı, 13.VII.2012, ♀.

Note: Turano euromediterranean extending to Siberia.

Xanthochilus saturnius (ROSSI, 1790)

Material examined: Erzurum: University field, 1880 m, 22.VII.2011, ♀.

Note: Holomedieterranean (except Libya and Egypt) and Turanian.

Tribe Stygnocorini

Stygnocoris rusticus (FALLEN, 1807)

Material examined: Erzurum: Pazaryolu, 1010 m, 7.VIII.2009, ♀, ♂.

Note: Euro mediterranean and turanian. On *Tanacetum*, *Pulicaria*, *Achillea*, *solidago*, *Cerastium* (PÉRICART 1998b).

Subfamily Plinthisineae**Tribe Plinthisini*****Plinthisus (Plinthisus) major* HORVÁTH, 1876**

Material examined: Erzurum: 11.VI.1979, ♂.

Note: Mediterranean (not recorded in Egypt), known in "Turkestan" (PÉRICART 1998b).

Family Pyrrhocoridae***Pyrrhocoris apterus* (LINNAEUS, 1758)**

Material examined: Adana: 29.VII.1993, ♀, 7.VIII.1983, 3 ♀♀, Kozan, 25.VIII.1998, ♀, ♂, Tufanbeyli, 23.VII.2010, ♀; Adıyaman: 19.VIII.1993, ♂; Ankara: 17.VIII.1984, ♂, Elvankent, 12.IX.2010, ♀, Kalecik, Kızılırmak, 625 m, 17.IX.2011, ♀, Kızılcahamam, 18.IX.2010, 3 ♀♀, ♂, Polatlı, 9.VII.1996, ♀; Antalya: Aksu, 18.VII.2010, ♀, Kepez, Odabaşı, 305 m, 24.VI.2012, ♀, Manavgat, 5.VIII.1996, ♀; Ardahan: Çeğili, 1834 m, 11.VIII.2012, ♀; Artvin: Şavşat, Karagöl, 18.VIII.1982, ♀; Aydın: Cine, 700 m, 17.VIII.2010, ♀; Bayburt: 1537 m, 1.X.2012, ♀; Burdur: 3.VIII.1993, 2 ♀♀, ♂; Bursa: İnegöl, 24.VII.1984, ♂, Mudanya, 26.VII.1984, 3 ♀♀, 2 ♂♂; Çorum: Osmancık, 12.X.1982, ♂; Denizli: Serinhisar, 24.VII.2011, ♀; Erzincan: Üzümlü, 22.IX.2009, ♀; Erzurum: 2.VI.1983, 2 ♀♀, 4.VI.1983, ♀, 5.VI.1983, ♀, 10.VI.1983, ♂, 13.VI.1983, ♀, 27.VII.1967, ♂, 27.VIII.1983, 3 ♀♀, 7.IX.2011, ♀, 2 ♂♂, 10.IX.1997, ♀, 18.IX.1967, ♀, 28.IX.1993, 2 ♀♀, 3 ♂♂, 15.X.1967, ♀, University field, 1850 m, 9.VII.1997, 4 ♀♀, 2 ♂♂, 3.VIII.2007, ♂, 31.VII.2007, ♂, 21.IX.2012, 2 ♀♀, ♂, 2.X.2012, ♀, 7.X.2012, ♀, Dutçu, 24.VII.2010, ♂, Palandöken Mountain, 2400 m, 25.IX.2010, 4 ♀♀, 3 ♂♂, Horasan, Çiftlik, 1546 m, 17.VII.2011, 2 ♀♀, ♂, Hacıahmet, 1823 m, 13.VIII.2012, ♀, Yeşildere, 1684 m, 28.VIII.2011, ♀, İspir, 7.VIII.2009, 3 ♂♂, Madenköprübaşı, 1244 m, 24.VI.2012, ♀, 1100 m, 1.VIII.1996, ♀, 20.VIII.2009, 3 ♀♀, Narman, 1900 m, 24.VII.2009, ♀, Dikmetaş, 2265, 17.VII.1990, ♀, ♂, Ünlükaya, 1700 m, 8.VI.2012, ♀, Olur, 18.IX.2011, ♂, Oltu, 23.VII.2010, ♀, 24.VII.2009, 4 ♀♀, Yolboyu, 1135 m, 10.VI.2012, ♂, Pasinler, 10.VI.1983, ♀, 11.VII.1996, ♀, 25.VI.1983, 2 ♀♀, Şenkaya, Paşalı, 1250 m, 10.VII.2011, ♀, Sındıran, 17.VII.2010, 2 ♀♀; Giresun: Bulancak, 2.VIII.2010, 2 ♀♀; Hatay: İskenderun, 5.VII.1990, 4 ♀♀, Denizciler, 20.VIII.1990, 2 ♀♀, 2 ♂♂; Iğdır: 2.VIII.1997, ♂, Aralık, 2.VII.1987, ♂, Melekli, 28.VII.1997, ♀; Isparta: Eğirdir, Serpil, 16.VIII.1996, 2 ♂♂; İstanbul: 7.VII.1984, ♀, Florya, 25 m, 7.IX.2011, ♀, Kemerburgaz, 31.VII.2011, ♀, ♂, Üsküdar, 13.IX.2010, ♂; Kahramanmaraş: 5.VII.2009, 2 ♀♀; Karaman: 19.VI.2010, ♀; Kars: Susuz, 1680 m, 25.VII.2011, ♀; Konya: Ereğli, 15.IX.2009, ♀, Selçuklu, 1016 m, 2.VII.2011, ♀; Malatya: 5.VIII.1990, ♀, ♂, 21.VIII.1993, ♀, Battalgazi, 2.VIII.1996, ♀, Sarıhan, 18.VIII.1984, ♂, 8.VII.1993, ♀, 9.VIII.1984, ♀; Mersin: Erdemli, Üçtepe, 120 m, 12.IX.2012, ♂, 25.IX.2012, ♀, Silifke, Sömek, 900 m, 4.IXX.2011, 2 ♂♂; Muğla: 11.VIII.1996, ♀, 12.VIII.1983, ♀; Niğde: 22.VII.1993, ♂, Bor, 22.VII.1993, ♀; Sakarya: Arifiye, 10.VIII.2011, 2 ♀♀, 3 ♂♂; Sivas: Gürün, 9.VIII.2010, ♀; Şanlıurfa: Viranşehir, Büyük Görümlü, 563 m, 8.VIII.2012, 2 ♀♀; Tokat: 15.VII.1983, 1 ♂; Trabzon: Araklı, Yolboyu, 25.VIII.1993, 8 ♀♀, 9 ♂♂, Şalpazarı, Kadirga, 13.VIII.1993, ♀, 2 ♂♂.

Note: An Holarctic species, on a very great number of plants among which Malvaceae are the majority (GHAHARI & MOULET 2012).

***Pyrrhocoris marginatus* (KOLENATI, 1845)**

Material examined: Erzurum: University field, 3.VI.2009, 2 ♀♀, Cat, 1913 m, 23.VII.2011, 4 ♀♀, Horasan, Çayırözü, 21.VIII.2011, ♀, Narman, 1900 m, 24.VII.2009, 3 ♀♀, ♂, Dikmetaş, 2265 m, 4.VII.2002, 4 ♀♀, ♂, Oltu, 1455 m, 17.VII.2010, 3 ♀♀, Şenkaya, İkizpınar, 31.VII.2011, 3 ♀♀, Sındıran, 17.VII.2010, ♀, ♂, Tortum, 1573 m, 21.VII.2010, 4 ♀♀.

Note: Euro siberian.

***Scantius aegyptius* (LINNAEUS, 1758)**

Material examined: Antalya: Kepez, 112 m, 18.VI.2012, ♀, 21.VI.2012, ♂, Odabaşı, 305 m, 24.VI.2012, ♀; Elazığ: Miyadin-Harput, Şimal, Mezra, 8.VIII.1973, ♂; Erzurum: Palandöken, 1850 m, 7.X.2012, ♂, University field, 1850 m, 21.IX.2012, ♀; Mersin: Tarsus, 3.VII.1993, ♀; Isparta: Eğirdir, Serpil, 30.VIII.1996, ♀; Sanlıurfa: Bozova, Yaylak, 435 m, 30.VII.2012, 9 ♀, ♂, Viranşehir, Büyük Görümlü, 563 m, 8.VIII.2012, 11 ♀, 2 ♂.

Note: A ponto mediterranean species known in Indian subcontinent. Another subspecies (*Scantius aegyptius rossii* CARAPEZZA, KERZHNER & RIEGER 1999) is also known in Turkey (Caucasian region).

Zusammenfassung

Vorliegende Arbeit behandelt das Vorkommen der Überfamilie Lygaeoidea (Heteroptera) basierend auf Material, das zwischen 1967 und 2012, schwerpunktmäßig 2009-2012, an verschiedenen Orten der Türkei aufgesammelt wurde. Insgesamt konnten aus dieser Verwandtschaft 58 Arten aus 40 Gattungen nachgewiesen werden, die häufigsten darunter waren *Lygaeus equestris* (LINNAEUS, 1578), *Spilostethus pandurus* (SCOPOLI, 1763), *S. saxatilis* (SCOPOLI, 1763), *Nysius cymoides* (SPINOLA, 1837), *N. graminicola* (KOLENATI, 1845), *N. senecionis* (SCHILLING, 1829), *Oxycarenus pallens* (HERRICH-SCHÄFFER, 1850), *Rhyparochromus pini* (LINNAEUS, 1758), *Xanthochilus quadratus* (FABRICIUS, 1798) und *Pyrrhocoris apterus* (LINNAEUS, 1758).

References

- AUKEMA B. & C. RIEGER (2001): Catalogue of the Heteroptera of the Palaearctic region. — Vol. 4: Pentatomomorpha I. The Netherlands Entomological Society, Wageningen.
- AYSEV N. (1974): Ege Bölgesi Lygaeidae Familyası Üzerinde Sistematiik Çalışmalar. — Güven Matbaası, Ankara.
- BEYAZ G. & S. TEZCAN (2002): Kültür kekiği (*Origanum* spp.) (Lamiaceae)'ndeki Heteroptera takımına bağılı böcek faunasının belirlenmesi üzerinde çalışmalar. — Türk. Entomol. Derg. **26**: 3-10.
- ÇAĞATAY N. (1988): Some Artheneinae from Turkey (Hemiptera: Lygaeidae). — Türk. Entomol. Derg. **12**: 201-208.
- ÇAĞATAY N. (1989a): Systematical studies on the Heterogasterinae of Turkey (Heteroptera: Lygaeidae). — Türk. Entomol. Derg. **13**: 5-14.
- ÇAĞATAY N. (1989b): Geocorinae of Turkey. — Entomol. Abh. Staat. Mus. Tierk. Dresden **53**: 27-36.
- ÇAĞATAY N. (1995): Lygaeinae of Turkey (Heteroptera, Lygaeidae). — Acta Entomol. Mus. Nat. Pragae **44**: 167-179.
- ÇAKIR S. & F. ÖNDER (1990): Türkiye Geocorinae (Heteroptera: Lygaeidae) altfamilyası üzerinde sistematiik ve faunistik araştırmalar. — Türk. Entomol. Derg. **14**: 37-52.
- DUMÉRIL A.M.C. (1806): Zoologie analytique ou méthode naturelle de classification des animaux. Allais éd., Paris.
- FAHRINGER J. (1922): Eine Rhynchotenausbeute aus der Türkei, Kleinasien und benachbarten Gebieten. — Konowia **1**: 137-144.
- FENT M. (2011): Gökçeada ve Bozcaada Heteroptera (Insecta: Hemiptera) faunasına katkılar. — Trakya Univ. J. Sci. **12**: 35-46.

- GHAHARI H. & P. MOULET (2012): An annotated catalog of the Iranian Lygaeoidea (excl. Berytidae and Piesmatidae) (Hemiptera, Heteroptera, Pentatomomorpha). — *Zootaxa* **3408**: 1-33.
- HEISS E. (2002): Beitrag zur Kenntnis der Wanzenfauna (Heteroptera) Irans. I. pp. 87-97. — In: GUTLEB B. & C. WIESER (eds), *Ergebnisse einer Zoologischen Exkursion in den Nordiran, 2001. Arthropoda (Lepidoptera, Trichoptera, Neuroptera, Heteroptera, Coleoptera, Opiliones, Aranea, Decapoda) und Vertebrata (Amphibia, Reptilia, Aves, Mammalia)*. — *Carinthia II* **192/112** (2001): 33-140.
- HENRY T.J. (1997): Phylogenetic analysis of family groups within the infraorder Pentatomomorpha (Hemiptera, Heteroptera), with emphasis on the Lygaeoidea. — *Ann. Entomol. Soc. Am.* **90**: 275-301.
- HENRY T.J. (2009): Biodiversity of Heteroptera. — In: FOOTIT R. & P. ADLER (eds), *Insect Biodiversity, Science and Society*, Blackwell Publishing, Chichester.
- HOBERLANDT L. (1956): Results of the Zoological Scientific Expedition of the National Museum in Prague to Turkey. 18. Hemiptera IV. Terrestrial Hemiptera-Heteroptera of Turkey. — *Acta Entomol. Mus. Nat. Pragae Supp.* **3** (1955): 1-264.
- HORVATH G. (1891): Hémiptères recueillis dans l'Arménie Russe avec la description d'espèces et variétés nouvelles. — *Revue d'Entomologie* **10**: 68-81.
- HORVATH G. (1901): Hemipteres du voyage de M. Martinez Escalera dans L'Asie- Mineure. — *Természetráji Füzetek*. **24**: 469-485.
- KERZHNER I.M. (2001): Family Pyrrhocoridae Amyot and Serville, 1843. — In: AUKEMA B. & C. RIEGER (ed.), *Catalogue of the Heteroptera of the Palaearctic Region. Vol. 4. Pentatomomorpha I. Wagnenigen*.
- KIRITSHENKO A.N. (1918): Hemiptera-Heteroptera faunae Caucasicae. — 1. mémoires du Musée du Caucase.
- KIYAK S. (1990): Systematisch-Ökologische Untersuchungen über die Wanzen (Insecta-Heteroptera) aus dem Gebiet Hazar-See, Maden und Ergani (Prov. Elazığ). — *J. Biol. Gazi Univ. Fac. Arts and Sci.* **1**: 43-95.
- KIYAK S. (1993): Über terrestrische Wanzenarten vom Soğuksu Nationalpark. (prov. Ankara, Türkei). — *Pri. Cen. En. Studies Ank.* **6**: 131-156.
- KIYAK S., Ö. ÖZSARAÇ & A. SALUR (2004): Additional Notes on the Heteroptera fauna of Nevşehir province (Turkey). — *Gazi Univ J Sci* **17**: 21-29.
- KIYAK S. & E. AKAR (2010): Faunistic study of terrestrial heteroptera of Çaldağ (Ankara, Turkey). — *Munis Entomol. Zool.* **5**: 1104-1118.
- LETHIERRY L. & G. SEVERIN (1894): *Catalogue Général des Hémiptères*. — Vol. **II**. Hétéroptères. Bruxelles.
- LINNAVUORI R. (2007): Studies on the Lygaeidae s.lat. (Heteroptera) of Gilan and the adjacent provinces in northern Iran. — *Acta Entomol. Mus. Nat. Pragae* **47**: 55-75.
- LINNAVUORI R. (2011): Studies on the Cimicomorpha and Pentatomomorpha (Hemiptera, Heteroptera) of Khuzestan and the adjacent provinces of Iran. — *Acta Entomol. Mus. Nat. Pragae* **51**: 21-48.
- LODOS N., ÖNDER F., PEHLIVAN E., ATALAY F., ERKİN E., KARSAVURAN Y. & S. TEZCAN (1989): Akdeniz Bölgesi'nin ziraatta zararlı ve faydalı böcek faunasının tespiti üzerinde araştırmalar (Curculionidae, Scarabaeidae (Coleoptera), Plataspidae, Cydnidae, Acanthosomatidae, Scutelleridae, Pentatomidae, Lygaeidae, Miridae (Heteroptera)). — *Türk. J. Agric. For.* **13**: 81-88.
- LODOS N., ÖNDER F., PEHLIVAN E., ATALAY R., ERKİN E., KARSAVURAN Y., TEZCAN S. & S. AKSOY (1999): Faunistic studies on Lygaeidae (Heteroptera) of Western Black Sea, Central Anatolia and Mediterranean Regions of Turkey. — *Ege Üniversitesi Basımevi, İzmir*.
- MOULET P. (1995): Hétéroptères Coreoidea euro-méditerranéens. In: *Faune de France*, t. **81**. — *Fédération des Sociétés de sciences naturelles éd. Paris*.

- ÖNDER F., KARSAVURAN Y., TEZCAN S. & M. FENT (2006): Heteroptera (Insecta) Catalogue of Turkey. — META Press, İzmir.
- ÖNDER F., ÜNAL A. & E. ÜNAL (1981): Heteroptera fauna collected by light traps in some districts of Northwestern part of Anatolia. — *Türk. Entomol. Derg* **5**: 151-169.
- ÖNDER F., ÜNAL A. & E. ÜNAL (1984): Heteropteraus insects collected by light traps in Edirne. — *Türk. Entomol. Derg.* **8**: 215-224.
- OSHANIN B. (1906): Verzeichnis der Palaearktischen Hemipteren mit besonderer Berücksichtigung ihrer Verteilung im russischen Reiche. I, 1. — Saint Petersburg.
- ÖZBEK H. & Ö. ALAOĞLU (1987): Erzurum çevresinde patates bitkisinde bulunan Heteroptera türleri. — *Bitki Kor Bül* **27**: 227-238.
- ÖZSARAC H., KIYAK S. & ÖZSARAC (2001): A Study on the Fauna of Heteroptera of Gökçeada (Çanakkale)-I. — *J. Inst. Sci. Tech. Gazi Univ.* **14**: 841-855.
- ÖZSARAC Ö. & S. KIYAK (2001): A Study on the Heteroptera Fauna of Bozcaada (Çanakkale province). — *Turk. J. Zool.* **25**: 313-322.
- PERICART J. (1998a): Hémiptères Lygaeidae euro-méditerranéens. In: Faune de France, t. **84a**. — Fédération des Sociétés de sciences naturelles éd. Paris.
- PERICART J. (1998b): Hémiptères Lygaeidae euro-méditerranéens. In: Faune de France, t. **84b**. — Fédération des Sociétés de sciences naturelles éd. Paris.
- PERICART J. (1998c): Hémiptères Lygaeidae euro-méditerranéens. In: Faune de France, t. **84c**. — Fédération des Sociétés de sciences naturelles éd. Paris.
- PÉRICART J. (2001): Family Lygaeidae Schilling, 1829 – Seed-bugs. In: AUKEMA B. & C. RIEGER (ed.), Catalogue of the Heteroptera of the Palaearctic region. — Vol. 4. Pentatomomorpha I. Wageningen.
- PLUOT-SIGWALT D. (1975): La spermathèque et les voies génitales femelles des Pyrrhocoridés (Hemiptera). — *Ann. Soc. Ent. France* **6**: 777-807.
- PUTON A. (1875): Catalogue des Hémiptères (Hétéroptères, Cicadines et Psyllides) d'Europe et du bassin de la Méditerranée. — 2nd edit, Paris.
- PUTSHKOV V.G. (1969): Lygaeidae. — In: Fauna Ukrainy **21** (3): 1-388.
- SCHUH R.T. & J.A. SLATER (1995): True bugs of the world (Hemiptera: Heteroptera), classification and natural history. — Cornell University Press, London.
- SEIDENSTÜCKER G. (1957): Heteropteren aus Anatolien I. — *İstanbul Univ. Fen. Fak. Mecm.* **22**: 179-189.
- SEIDENSTÜCKER G. (1958): Heteropteren aus Anatolien II. — *İstanbul Univ. Fen. Fak. Mecm.* **23**: 119-129.
- SEIDENSTÜCKER G. (1960): Heteropteren aus Anatolien III. — *İstanbul Univ. Fen. Fak. Mecm.* **25**: 145-154.
- SLATER J.A. (1964): A catalogue of the Lygaeidae of the world. I-II. — Waverly Press, Baltimore.
- SLATER J.A. & J.O. O'DONNELL (1995): A catalogue of the Lygaeidae of the world (1960-1994). — New York Entomological Society, New York.
- STAL C. (1868): Hemiptera Fabriciana. — *I. Kongl. Svensk. Vetensk Akad. Handl.* **7**: 1-148.
- STAL C. (1872): Genera *Lygaeidarum* Europae disposuit. — *Öfv. Kongl. Vetensk Akad Förh* **29**: 37-62.
- STAL C. (1874): Enumeration Hemipterorum. 4. Kongl. Svensk. — *Vetensk Akad. Handl.* **12**: 1-186.
- STICHEL W. (1957-1959): Illustrierte Bestimmungstabellen des Wanzen. II. Europa. — Stichel éd., Berlin. [1957: 1-96; 1959, 225-384].
- SWEET M.H. (2000): Seed and chinch bugs Lygaeoidea. — In: SCHAEFER C.W. & A.R. PANIZZI (ed.), Heteroptera of Economic Importance. CRC Press, Boca Raton.

- TUATAY N., KALKANDELEN A. & N. AYSEV (1972): Catalogue of Insect Conservation Museum of Flora (1961-1971). — Yenigün Matbası, Ankara.
- WAGNER E. (1959): Beitrag zur Heteropterenfauna Anatoliens. — Z. Angew. Ent. Hamburg **44**: 102-113.
- YILDIRIM E., ÖZBEK H. & F. ÖNDER (1999): Atatürk Üniversitesi (Erzurum) kampüs alanında ışık tuzaklarında yakalanan Heteroptera türleri üzerinde bir araştırma. — Türk. Entomol. Derg. **23**: 225-228.

Authors' addresses:

Prof. Dr. Erol YILDIRIM and Mrs. Gülten YAZICI
Atatürk University, Faculty of Agriculture
Department of Plant Protection
TR-25240, Erzurum, Turkey
E-mail: yildirimerol@hotmail.com

Pierre MOULET
Museum Requien
67 rue Joseph Vernet
F-84000 Avignon, France
E-mail: pierre.moulet@mairie-avignon.com